

**THE EFFECTIVENESS OF VIDEO ASSISTED
TEACHING PROGRAM ON KNOWLEDGE
REGARDING PUBERTY AMONG GIRLS IN SELECTED
SCHOOL AT MANAMADURAI, SIVAGANGAI
DISTRICT, TAMILNADU.**



**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R MEDICAL UNIVERSITY, CHENNAI,
IN PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE DEGREE OF
MASTER OF SCIENCE IN NURSING
APRIL - 2012**

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BY

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ABSTRACT

STATEMENT OF THE PROBLEM

A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school at Manamadurai, Sivagangai district, Tamilnadu.

OBJECTIVES OF THE STUDY

- ✓ To assess the pre-test level of knowledge regarding puberty among girls in government school.
- ✓ To assess the post-test level of knowledge regarding puberty among girls in government school.
- ✓ To evaluate the effectiveness of the teaching program on knowledge regarding puberty among girls in government school.
- ✓ To find out the association between pre-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.
- ✓ To find out the association between post-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.

HYPOTHESES

- ✓ Post-test level of knowledge score for girls who are exposed to video assisted teaching program will be significantly higher than the pre-test level of knowledge.

- ✓ There will be a significant association between pre-test level of knowledge on puberty and selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, source of information and place of living.
- ✓ There will be a significant association between post-test level of knowledge on puberty and selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, source of information and place of living.

ASSUMPTION

- Pretest level of knowledge will be less than the post-test level of knowledge regarding puberty among girls.
- Video assisted teaching program may improve the knowledge regarding puberty in girls.
- Selected demographic variables may influence the knowledge of girls regarding puberty.

The conceptual framework of the study was derived from general system theory, (Ludwig von Bertalanffy).

The study made use of one group pretest and posttest design. Convenient sampling method was used to select 150 samples. Video assisted teaching program was administered to the samples and the effectiveness of video assisted teaching program was evaluated.

A well formulated questionnaire was made which comprised of selected variables. The knowledge questionnaire was used to assess the level of knowledge on puberty among samples. For analysis inferential

and descriptive statistical methods were used. It was evident from the study finding that the knowledge was improved after video assisted teaching program.

MAJOR FINDINGS OF THIS STUDY

- ◆ (122) 81.33% had inadequate knowledge and (28) 18.67% had moderately adequate knowledge in the pre-test.
- ◆ 74.67% had adequate knowledge and 25.33% had moderately adequate knowledge in post-test.
- ◆ The mean post-test knowledge score was significantly higher than the mean pre-test knowledge score at 0.001 levels. This indicated that the video assisted teaching program has helped the samples to improve their knowledge on puberty.
- ◆ There is a significant association between pretest level of knowledge and demographic variable such as education and mother's education.
- ◆ There is a significant association between post-test level knowledge level and demographic variable such as education.

RECOMMENDATIONS

On the basis of the study findings, it is recommended that

- ❖ A similar study could be replicated with a larger sample
- ❖ A study may be conducted to assess the knowledge among school teachers regarding puberty.
- ❖ A comparative study may be done to regarding knowledge on puberty between adolescent girls, who attained menarche and pre adolescent girls, who have not attained menarche.

- ❖ A comparative study may be done between rural and urban pre-adolescent girls regarding knowledge and expectations of puberty..
- ❖ A longitudinal study could be done on the effectiveness of pre-menarcheal training among adolescents who after attaining menarche.

CONCLUSION

The present study finding shows that the samples who were attending the video assisted teaching program have shown improvement in the level of knowledge which was proved statistically. The respondents expressed their gratitude for the knowledge they gathered regarding puberty. This feedback led the future researcher to use the questionnaire as a guide for assessing knowledge on puberty. The Headmistress and teachers were appreciated the topic and video compact disc.

Video assisted teaching method was very much encouraging among the school girls rather than other methods. It is necessary to learn about puberty for the girls who attend menarche. Series of teaching on the same aspect of all school girls will be improve their knowledge as well as improve their physical and mental health.

CHAPTER – 1

INTRODUCTION

“Puberty for a girl is like floating down a broadening river into an open sea.”
-Granville Stanley Hall.

Puberty may be the biological time frame involving the child as well as their adult seen as a physical body changes that lead to sex maturity. In these times adolescence experiences a growth spurt develops, create secondary sex features and attain the reproductive system maturity. The moment associated with puberty beginning and its progress tend to be varied between people and therefore are influenced mostly by genetics.

In women sex maturation begins to thelarche, the appearance of breast buds that happens from around 9 years to 11 years is the first sign of the ovarian function. It's followed by development with pubic hair. In the course of thelarche, the growth spurt or height increases. The very first menstruation commences around twelve months after the height increases. That usually happens involving the age groups of nine and fourteen years; the average age group is actually 12.4 years.

Major hormonal events encircling menarche entail the secretion regarding follicle stimulating hormone from the pituitary gland. FSH energizes the ovaries to begin follicular readiness also to produce the extra estrogen. Continuing growth of the secondary sexual characteristics commences around the age 11 to 13.

Through the entire process of puberty girls may experience a myriad of physical and emotional changes, modifications in system image as well as interpersonal connections generally accompany these kinds of

According to **Jaiyesimi**, puberty is an important phase in a girl's life. Parents should talk to their daughters regarding pubertal changes and support them throughout this phase. Schools also have a role to play, through sexual health and relationship education, in ensuring proper understanding of pubertal changes. Girls should be encouraged to feel good about them, learn to care for their body and maintain good health.

Types of changes	Body changes	Definition	Average age initiates	Average age completes
Growth spurt	Adolescent growth spurt	Height increase 2.4 – 4.3inches in 1 year.	10years	11.8years
Secondary	Thelarche	Breast budding	9.8years	14.6years
	Adnerche	Increases adrenal	10.5years	

Primary	Menarche	androgen secretion → axillary and pubic hair. First menstrual period	12.8years	
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Menstruation is the periodic discharge of bloody fluid from the vagina that women experience during reproductive years. Menstrual flow begins at puberty. The average time for a menstrual cycle is 28-32days (**Ward Hisley** P127 – 128).

Adolescence in girls is a turbulent period, which includes stressful events like menarche, considered as a landmark of female puberty. The girl might receive the menarche positively however negative responses such as shame, fear, anxiety and depression are more common.

Menarche may occur as early as 8 or 9 year of age. It is good to include health teaching information on pubertal changes and menarche to girls.

Nurses can help young adolescence to understand the normal physical and psychosexual changes taking place during puberty and menstruate. So they may learn to see it positively.

NEED FOR THE STUDY

“As kids approach puberty, parents should talk about sex and set up the right kinds of guidelines for social interaction”.

- Lawrence Cohen

“If I hear, I forget

If I see, I remember

If I do, I know”.

- Chinese proverb

Puberty can be a challenging moment for many girls. In many communities menarche is definitely an indicator of a girl's developing sexuality.

Teenage is a period of extreme anxiety and stress. Menarche sure brings about tremendous psychological as well as interpersonal reaction in them. Menstruation continues to be considered to be something not clean and also filthy in Indian society. The response towards menstruation depends upon attention as well as knowledge about the topic. Although menstruation can be a natural process, it's really linked with a number of myths practices which sometimes result in adverse outcomes. Improved information about menstruation right from the child years might escalate safe procedures and may help in abating as well as enduring of an incredible number of ladies.

In lots of societies, the family and also immediate neighborhood usually provide young adults with information and also guidance regarding sexuality and sex. In Ghana, family members used to observe closely the teenage girls who reached menarche were instructed through their own moms along with other females regarding habits related to menstruation. They were also instructed concerning taboos to become observe in the course of menstruation.

The menstruation is really a natural event all through women's life, yet it's a topic that is rarely and openly mentioned. Lots of women lack of adequate knowledge of it. They frequently possess misconception as well as wrong thinking approved through the family as well as communities. Many women do not understand the purpose of menstruation and also what occurs in their bodies throughout the menstruation. **(Johnson 2006)**

The lack of pre-menarcheal training led to unacceptable menstrual experiences as well as poorer menstrual cleanliness practices. The contributors with the health sector, advertising and the formal educational field in the pre - menarcheal instruction were weak **(Poureslami 2002)**.

As a part of health education programs, 159 sixth-grade individuals (mean = 12.1 years) had been surveyed to acquire their questions regarding puberty and their own self-assessed pubertal stage. A majority of the actual queries reflected biological subjects (88%), for example genital physiology (26%) as well as sexuality and also reproduction (26%). Simply 6% addressed psychosocial concerns. Health educators and nurses might need to concentrate on physiological places to offer more significant information about the growth and progression of early adolescence **(Thomas SA)**.

In the recent research regarding the first menstruation and the differences between those who had knowledge of menstruation prior to menarche and those who did not. Information through 305 ladies with inside of India had been collected relating to menarcheal blood loss, dysmenorrhoea as well as menarcheal age. Those who acquired knowledge prior to menarche regarded it to be a normal physiological function, while those that did not had been "appalled" and also "horrified". Individuals getting knowledge stood a high rate of regularity,

reduced rate of dysmenorrhoea and also early puberty. The topics were unanimous in their wish to have more information to become offered prior to menarche (**Skandhan KP**).

Throughout Tamilnadu, India, a report pointed out in which among college girls between the ages of 12-17, more than half of the adolescence used old cloth, sanitary pad or even panties as a menstrual product, which are laundered by them only once or even two times a day rather than four or five times a day. These girls have worried limitations in their mobility as well as behavior during menstruation and superstitious stating, the ‘polluters’ of the atmosphere.

The ceremonial attentions of menarche in the manjal neer-attu vizha rituals, accompanied by seclusion and other restrictions on the girls’ behavior, continue to be maintained in the Tamilian tradition. But despite the prominence with this ceremonial awareness of “coming of age”, hardly any attention is paid in educating teen girls about the “facts of life” regarding the menstruation. The majority of girls in Pondicherry location has been unprepared for the trauma of the first menses. Despite the particular attainment of menarche, almost no information is provided to girls concerning the physiological processes involved and also the hygienic practices to be followed (**Narayan KA, 2001**).

Study on “Preparing girls regarding menarche” found that the pre-menarcheal girls acquired low information concerning menstrual hygiene. And there was a desire to make the students aware of menstrual hygiene. Therefore she carried out a structured teaching program that was discovered to be an effective training strategy (**George M, 2003**).

Research has been carried out regarding “Indigenous practices of Saudi women throughout the Capital of Saudi Arabia in their

menstruation”. The outcomes says practically two third of ladies averted some food items, drinks and actions such as taking a shower and also carrying out practice numerous indigenous rituals throughout the period. Mom and also siblings had been the main way to obtain the source of girl’s information. The study shows that nurses and also medical service providers should utilize all accessible opportunities to instruct young girls about menstruation (**Moawed.S.2001**).

The particular constraints and other traditional features impacting adolescence girls are usually more powerful in rural locations. In the urban sector, the girls from poor family members additionally report both poor hygiene practices also more traditional constraints as well as beliefs. Studies elsewhere also revealed that adolescence heard hardly any details about menstruation prior to these people experience their first menstruation and also this ignorance leads to different reactions which includes worry, timidity, shame as well as nervousness. Another significant finding of the research studies lack of adequate education about the hygienic management of menstruation and the provision of facilitating for disposal of menstrual materials.

There are very few scientific reports done in our own district/country regarding puberty.

Several studies advised that menstrual wellness directions should contain useful chats on what girls take care of by themselves throughout periods, so that you can sustain proper monthly period and also cleanliness methods. These kinds of instructions would be best begun prior to menarche.

In our curriculum sex education starts from the 9th standard but our girls are attaining menarche from 10years that is 5th standard. Hence the

investigator thought that the teaching will improve the knowledge and awareness among girls regarding pubertal changes and menarche. So she selected this study.

STATEMENT OF THE PROBLEM

A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school at Manamadurai, Sivagangai District, Tamil Nadu.

OBJECTIVES OF THE STUDY:

- ★ To assess the pre-test level of knowledge regarding puberty among girls.
- ★ To assess the post-test level of knowledge regarding puberty among girls.
- ★ To evaluate the effectiveness of the teaching program on knowledge regarding puberty among girls.
- ★ To find out the association between pre-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.
- ★ To find out the association between post-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.

HYPOTHESES:

- ★ The post-test level of knowledge score for girls who are exposed to video assisted teaching program will be significantly higher than the pretest level of knowledge.

- ★ There will be a significant association between pre-test level of knowledge on puberty and selected variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.
- ★ There will be a significant association between post-test level of knowledge on puberty and selected variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.

OPERATIONAL DEFINITION

Effectiveness

In this study, it refers to improvement in the level of Knowledge among girls who attended the video teaching program.

Video assisted teaching programme

In this study, it refers to video that contains information regarding puberty such as Anatomy and Physiology, pubertal changes, menstruation and menstrual hygiene. This program was prepared and imparted by a researcher.

Knowledge

In this study knowledge refers to understanding and awareness about puberty among school girls.

Puberty

In this study, it refers to the development of secondary sexual characteristics and the reproductive organs become physically functional which usually takes place between 10- 14years among girls.

Girls

It refers to school going female children those who are studying in 6th and 7th standard (10-13yrs) who have not attained menarche, in the Government school at Manamadurai.

ASSUMPTION

- ✱ School girls at the age of 10-13years will not have adequate knowledge regarding puberty.
- ✱ Video assisted teaching programme may improve the knowledge regarding puberty on school girls.
- ✱ Selected demographic variables may influence the knowledge of girls regarding puberty.

LIMITATIONS:

- ✧ The study was limited to 6 weeks.
- ✧ The study was limited to 150 samples.

PROJECTED OUTCOME:

This study helps to assess the knowledge and it aims to evaluate the effectiveness of video assisted teaching programme regarding puberty among school girls.

Video assisted teaching program will help them to prepare physically and psychologically during menstruation and prevent the problems that they might encounter if they would not have an acquired knowledge. It will help them to improve their self care ability, follow healthy and hygienic menstrual practices in later period.

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was derived from General system theory, (**Ludwig von Bertalanffy**). According to general system theory a system is a set of units interacting with each other within a boundary that filters the kind and the rate of flow of inputs and outputs to and from the system.

General system theory is useful in breaking the whole processes in parts to ensure goal realization. The number of parts of the system is totally dependent on what is needed to accomplish the goal. Purpose, goal or aim is necessary for any system to function. The aim of the study is to improve the knowledge regarding puberty among school girls.

Berrtalanffy explained that the system has four major aspects.

- ❖ Input
- ❖ Throughput
- ❖ Output
- ❖ Feedback

INPUT

It is the type of information that enters into the system from the environment through its boundaries.

In this study, it is the video assisted teaching program regarding puberty that is Anatomy and Physiology of the female reproductive system, menstrual cycle, pubertal changes in girls and menstrual hygienic practices.

THROUGHPUT

It is the process that occurs between the input and output in such a way that can be readily used by the system. In this study the throughput consists of the process of transformation of knowledge on puberty.

OUTPUT

Output is any information that leaves the system and enters the environment through system boundary.

In this study output is the changes in the knowledge found among girls, which is interpreted as inadequate knowledge, moderately adequate knowledge and adequate knowledge regarding puberty.

FEEDBACK

It is the result of throughput. It allows the system to monitor its internal function, so that it can either increase or restrict its input of its output.

Feedback is necessary for those who belong to the group that falls under inadequate knowledge, moderately adequate knowledge. Subsequent session will increase their knowledge.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature is a key step in any research project and is an important step in the development of a research project. It helps the investigator to analyze what is known about the topic and to describe methods of inquiry used in earlier works including the success and shortcomings.

Literature relevant to this study was reviewed organized the following sequence.

REVIEW OF LITERATURE IS PRESENTED UNDER THE FOLLOWING HEADINGS:

- Knowledge related to pubertal changes
- Knowledge, attitude and practice regarding menstruation
- Age at menarche
- Knowledge regarding menstrual hygiene
- Emotional changes regarding puberty
- Studies related to effectiveness of structured teaching program on puberty, menstruation and menstrual hygiene.

KNOWLEDGE RELATED PUBERTAL CHANGES

Jaffer YA, (2006) examined the knowledge, attitudes and practices of Omani adolescents with regard to reproductive health through a self administered questionnaire. The study result showed that

only half of the sample knew the changes at puberty of their own sex, while even fewer knew the changes in the opposite sex.

Tazeen Saeed Ali, (2006) conducted a cross-sectional study to determine the understanding and level of knowledge on puberty and health problems among female adolescence of Karachi. Data were collected from 150 female adolescence between 10-19 years of age. Sixty six percent (66%) of the participants were aware of the names of reproductive system. The majority of the participants received information related to sexuality from their mothers. Cable and internet were cited as a major source of puberty and sexual health related information. The study concluded that there is a lack of knowledge related to puberty and related health problems among female adolescence. The researcher recommended that the adolescence should be provided with health education before and during their puberty period to make them confident in dealing with their body changes during puberty effectively.

Marvan ML et al., (2003) conducted a comparative study on menstrual related changes expected by premenarcheal girls living in rural and urban areas of Mexico with the aim of exploring the expectation concerning the premenstrual changes. 1173 girls from rural and urban areas were selected as samples. The correlation was done and the researchers found that urban girls are exposed to media with present a picture of menses events.

KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING MENSTRUATION

Udgiri M et al., (2010) conducted a study with adolescent girls who had attained menarche. The samples were 342 adolescent girls, out

of which 324 (94.74%) were literate. Even then only 63 (18.42%) had knowledge about menstruation prior to attainment of menarche. The findings of this study also show that, the main source of information about menstruation was mother, 195 (57.01%). Nearly 81.58% adolescent girls were lack of knowledge about menstruation prior to menarche, this study reflected upon the standard of awareness in the society.

Rembeck GI et al., (2004) conducted a study on “improving pre and post menarche attitude towards menstruation among 12 years old girls”. The researcher had an assumption that since adolescence is a time of rapid changes, education may improve understanding and changes the attitudes toward menstruation among adolescence. They investigated the effects of education on attitudes. Two interventions are compared in 345, 12 year old girl. New active intervention given to premenarcheal girls just before menarche result improvement in attitude towards menstruation compared with standard intervention. Thus they concluded just before menarche, girls should be offered education modelled after an active intervention. They also suggested that education must be concrete and based on multi sensory learning.

AGE AT MENARCHE

Ogeng'o DN, (2011) did a study to determine the mean menarcheal age among urban primary school girls in Kenya. The mean menarcheal age was 12.5 ± 2.8 years with peak at 12-14 years. A substantial number of girls (10.8%) attained menarche before the age of 11years, with 2% of them attaining it before 10 years. None attained menarche before nine or after 16 years. Mean menarcheal age of 12.5 years was lower than 11 years in more than 10% of the girls. So the researcher

suggested for early commencement of reproductive health education and follow-up for complications of early menarche.

Sunuwar L and Saha CG, (2010) carried out a study to explore the mean age at menarche of school going girls of Western Nepal. The statistical findings of this study were as follows; the age at menarche was found to be 12.69 +/- 0.95 years. The mean age at menarche of those attending community schools was significantly higher than that those attending private schools (12.85 +/- 0.87 vs 12.41 +/- 0.99 years). The mean age at menarche was found to be delayed with an increase in the number of family members and more siblings.

Gaudineau A and Ehlinger V, (2010) conducted a study to describe the age at onset of menarche in a large nationally representative sample of French schoolgirls. They found that the median age at onset of menarche was 12.8 years, as the mean age at onset of menarche. They concluded that age at onset of menarche and its variability have decreased in most developed countries and seems stabilized at 13.0+/-0.5 years. The age limit of 9 years seems more coherent to define early menarche.

Batubara JR and Soesanti F, (2010) did a study to assess the age at menarche of Indonesian girls and to know the influence of BMI on menarche. This study showed that most of Indonesian girls attained menarche at the age of 12-14 years (mean age of 12.96).

SA. Rokade and A.K. Mane, (2009) this study attempted to find the mean age at menarche in girls of Pune city (Maharashtra). The study was conducted to find the association of age at menarche with socioeconomic status, diet and exercise. 742 Maharashtrian girls at age 9 to 16 years were selected as samples. Of the total subjects studied the percentage of girls who reported that they had their first period by 11th

birthday was 1.42%, 12th birthday 13.13%, 13th birthday 34.17%, 14th birthday 52.37%, 15th birthday 57.59% and 16th birthday was 58.38%. Thus the percentage of girls attaining menarche increases as the age advances, as expected.

Kashani HH and Kavosh MS, (2009) carried out a cross-sectional study during 2005-2006 in 3192 girl students, aged 6-17 years, in Isfahan, Iran to find the mean age of puberty. The findings of the study show that the median age of puberty onset is 10.14 years and the onset of puberty before 7.5 years is considered as precocious puberty in a representative sample of Iranian girls. The values obtained from the study can provide baseline data for analysis of time trends, as well as for international comparisons.

O'Connell A and Gavin A, (2009) conducted a study to determine the mean age at menarche of the Irish girls, as this has not been verified since 1986. A nationally representative sample of Irish girls (n = 4720, age 10-18 years) was obtained from school aged children by survey approach. The mean menarcheal age was calculated using the recall method. Mean age at menarche decreased from 13.52 years in 1986 to 12.53 years in 2006 and was lowest in cities and among manual groups. The researchers suggested for ongoing observation of this biological milestone to identify whether this secular trend will stabilize in Ireland and at what age. Consequences of earlier biological maturation on adolescent health behaviors and outcomes should also be monitored.

Amrita Bagga and Kulkarni S., (2000) reported on secular trends in age at menarche in Maharashtrian girls. This is a review of studies on mean menarcheal age of Maharashtrian girls from 1960s onwards (Rakshit 1962; ICMR1972; Kundalkar 1981) and the present study

conducted a decade later. The studies showed that there is a consistent lowering of age at menarche with an average, by about six months per decade. When Rakshit (1962) studied Maharashtrian Brahmin women of Nagpur, he reported, mean menarcheal age as 14 years and 4 months. Study undertaken by the Indian Council of Medical Research (ICMR 1972) reported the mean menarcheal age for Maharashtrian girls as 13 years and 9 months. Kundalkar (1981) reported it to be 13 years and 2 months, and the present study maintains the same trend showing a still lowering of age at menarche which now stands at 12 years and 6 months.

KNOWLEDGE REGARDING MENSTRUAL HYGIENE

Lawan UM and Yusuf NW, (2010) examined the knowledge and practices of adolescent school girls in Kano, Nigeria regarding menstruation and menstrual hygiene. Data were collected quantitatively and analyzed. The mean age of the girls was 14.4 +/- 1.2 years; the majority was in their mid adolescence. The students attained menarche at 12.9 +/- 0.8 years. The majority had a fair knowledge of menstruation, although deficient in specific knowledge areas. Institutionalizing sexuality education in Nigerian schools; developing and disseminating sensitive adolescent reproductive health messages targeted at both parents and their adolescent children; and improving access of the adolescents to youth friendly services are veritable means of meeting the adolescent reproductive health needs in Nigeria.

Mandal A (2007) did a study with the adolescent girls to evaluate the knowledge and practice on different aspects of menstrual hygiene. Although knowledge was better than practice, both were not satisfactory among the samples selected for this study. This study insisted the importance of educating adolescence girls about the process, significance

of menstruation, the usage of sanitary napkins and its proper disposal. This can be achieved by a health educational program (by teachers, family members, health educators, and media) so that there would not be any misconception to the adolescent girls regarding menstrual hygiene.

Kalman M, (2003) conducted a study on menstrual preparation for adolescent girls living apart from their mothers with an aim of preparation of the girl for menarche to combat anxiety. The study was a survey approach and descriptive design. The study was conducted at the State University of New York. 200 adolescent girls 11-18 years were the samples. The study found that 80.2% reach menarche seeks information from mother to combat anxiety.

Abioje - Kuteyi EA, (2000) conducted a study on menstrual knowledge and practice among secondary girls with the aim of acute need for education and psychological preparation of girls for menstruation. The study was conducted at the department of community health, the Wolowa University, Nigeria. 350 secondary school girls were randomly selected for this study. The study found that 66.3% used insanitary materials during menstruation and 95.2% need education and psychological preparation regarding menstruation.

EMOTIONAL CHANGES REGARDING PUBERTY

Maria et al., (2006) conducted a study on “Emotional reactions to menarche among Mexican women of different generations”. This study explored the information received about menstruation by Mexican women as well as their reactions to menarche. The most important topics that teenagers, young women and middle aged women were informed about menstrual hygiene and Physiology. In contrast, senior citizens were more informed about hygiene and activity restrictions. Regarding their

reactions to menarche, teenagers and young women reported being confused. Positive reactions were reported only by older women who had knowledge about menstruation prior to menarche. Finally, younger women were more likely to present ambivalent reactions to menarche, probably because they are exposed to mixed messages which are often contradictory, resulting in more confusion and ambivalence.

Benjet, (2002) has been reported that the role of pubertal development on depression, external behavior problems, self-esteem and body image of 951 Mexican early adolescence. The between age of 10 to 12 years students were assessed at the beginning and the end of the school year. The main finding of this study showed that the acute experience of menarche adversely affected Mexican adolescence girl's psychological well-being, more specifically in terms of depressive symptomatology. The results have been suggested that perceived maternal control, prior social-emotional adjustment, and menstrual attitudes may moderate the effects of pubertal change.

STUDIES RELATED EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON MENSTRUAL HYGIENE AND MENSTRUATION:

Adinma, (2009) carried out a study to exhibit pre-menarcheal instruction has been considerably related to the particular instructional achievement from the respondent's parents. The particular conclusions in this study in the traditional American Federal Republic of Nigeria demonstrated that parent education was positively connected with girls' monthly knowledge. The particular academic accomplishment regarding parents is anticipated to impact the economic power with the family as well as personal's sociable exposure therefore reduce unfavorable impact associated with harmful local methods. The respondent's partnership making use of their parents was not considerably related to pre-

menarcheal education. These studies highlight the effectiveness of formal training in woman individuals with regards to health issues.

Rao RS and Lena A, (2008) carried out a study to find the effectiveness of educational information program on knowledge of reproductive health among adolescence. The researcher reported that desirable changes in knowledge among adolescence girls were found regarding reproductive health, after an educational information program.

Swasthya, an NGO, (2003-2006) conducted a cross sectional study among both married and unmarried girls of age 12-23 years at Tigre and Naglamachi, slum areas in Delhi. Baseline survey covered 294 of 477 people and after two years end line survey was conducted which covered 363 of 697 people. The study showed that the participants' knowledge, attitude and life perception have really improved after the teaching program.

Dongre AR and Deshmukh P.R, (2007) conducted a study to assess the effectiveness of community based health education intervention in the management of menstrual hygiene among rural Indian adolescent girls. A study was done in 23 PHC in Anji village in Wardha district of Maharastra state. Study subjects were unmarried adolescent girls (12-19 years). The messages were delivered at monthly meetings in the village among groups of adolescent girls. After 3 years more adolescent girls (55%) were aware of menstruation before its initiation compared with baseline (35%). The practice of using ready made pads increased significantly from 5% to 25% and reuse of cloth declined from 85% to 57%.

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with the description of methodology and different steps, which were undertaken for gathering and organizing the data for the investigation. The research methodology is the systematic way to solve the research problem.

According to **Dempsey** research methodology define the pertinent information gathered in order to answer the research question or to analyze the research problem. The methodology enables the researcher to project a blue print of the research undertaken. It includes the description of the research approach, the research design, variables, setting, population, sample and the sample size, the sampling technique, the sampling criteria, the selection of the tool, the development and description of the tool, the pilot study, the data collection procedure, the plan for data analysis and ethical consideration in the study.

The present study was done to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school in Manamadurai at Sivagangai district, Tamilnadu.

RESEARCH APPROACH

Polit and Hungler, state that traditional strategy for the conduct of evaluation of research consists of four broad phases: determining the objectives of the program, developing a means of measuring the attainment of those objectives, collecting data and interpreting the data in terms of the objectives.

The research approach used for this study was a quantitative approach. The investigator compares the pre-test and post-test knowledge regarding puberty among girls who are studying 6th and 7th standard.

RESEARCH DESIGN

One group pre-test post-test design was used.

Pre-test	Intervention	Post-test
O1	X	O2

O1 - Pre-test knowledge regarding puberty.

X - Video assisted teaching program on puberty.

O2 - Post-test knowledge regarding puberty.

SETTING OF THE STUDY

The study was conducted among girls at Government Girl's Higher Secondary School Manamadurai. It is 6 km away from the Matha college of Nursing. Government Girl's Higher Secondary School comprises of classes from sixth standard to twelfth standard. There are thirty two teachers employed in the school. Totally 1600 students are studying in the school. Total number of students studying in VI and VII standard are 270, out of which 150 girls were selected for the study. The working hours are from 9.00 am to 5.00 pm with lunch break of one hour from 1.00pm to 2.00pm.

POPULATION

The population of the study was girls who are studying in 6th and 7th standard. The Target population of the study was girls who are not attained menarche.

SAMPLING

Sample size:

The sample comprised of 150 girls studying in 6th and 7th standard who are not attained menarche.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

- Girls who are not attained menarche.
- Girls those who are in 6th and 7th standard.
- Those who are willing to participate in the study.
- Those who can understand and read Tamil.
- Girls those who are having normal growth and development.

Exclusion criteria:

- Those who are not interested to participate in the study.
- Girls who are absent to school during data collection.
- Girls who already attained menarche.

SAMPLING TECHNIQUE

The sample was selected adopting a convenient sampling technique.

DEVELOPMENT OF TOOL

The tool was constructed for the purpose of obtaining data for the study. It was developed by the researcher on reviewing the relevant literature in consultation with medical and nursing experts in the field of Obstetrics and Gynaecology Nursing.

DESCRIPTION OF THE TOOL

The structured questionnaire was the tool which includes the demographic data and the specific questions on knowledge of girls on puberty.

Section - I: Demographic data

Consist of demographic schedule such as age, educational status, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.

Section – II: Self-structured questionnaire on knowledge

It consists of 34 multiple choice questions to assess the knowledge regarding puberty such as (a) Anatomy and Physiology of the female reproductive system, (b) menstruation, (c) pubertal changes and (d) menstrual hygiene. The time taken to fill the questionnaire was about 30 minutes.

SCORING PROCEDURE

Scoring of response for knowledge was done as follows. The knowledge of puberty was measured in terms of knowledge score. Each question consisted of four alternatives with one correct response and three distracts. Each correct response was given a score of 1, others was given

a score of 0. The maximum possible score was 34 and minimum score was 0.

The subjects were classified into three groups based on their score.

Adequate knowledge	- 61 – 100%
Moderately adequate knowledge	- 36 – 60%
Inadequate knowledge	- less than 36%

TESTING OF THE TOOL

Validity:

The content of the questionnaire and video assisted teaching programme was checked and discussed by experts in the field of Obstetrics and Gynaecology Nursing, Paediatric nursing and Community Health Nursing and a M.D in Obstetrics and Gynaecology. Based on their valid suggestions reframing the tool was done.

Reliability:

The reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to measure.

The reliability of the tool of the present study was established by using test and retest method. This tool was administered to 15 girls who represent the characteristics of the study population. The co-efficient reliability $r = 0.843$. So the tool was accepted as reliable.

PILOT STUDY

A pilot study was conducted with a sample of 15 girls who were studying in 6th and 7th standard and not attained menarche. It was found that there was a significant gain in knowledge which is attributed to the

intervention given. Data were analyzed to find out the suitability of statistical methods. There were no problem during the study and it was found to be feasible. The subjects included in the pilot study were excluded from the main study. No modification done in the tool and video assisted teaching program.

DATA COLLECTION PROCEDURE

The main study was conducted in Government Girl's Higher Secondary School, Manamadurai. Prior to the data collection, formal permission was obtained from the head of the institution by the investigator. Also a written permission was obtained from the Headmistress of the Government School, Manamadurai. The period of data collection was six weeks. Investigator met the class teachers of sixth and seventh standards and explained the purpose of the study. Then the investigator gathered the students who met inclusion criteria by convenient sampling and explained the procedure to gain the confidence among them and collected the data through the formulated questionnaire. The data collection procedure was conducted in the school campus from 10am -12pm daily.

The knowledge questionnaire was distributed to samples; meanwhile their doubts were also cleared. Each day the data was collected from 10-15 samples. After receiving the questionnaire, video assisted teaching was given which prepared by the investigator for 45 minutes. After 15 days post-test was done.

Good rapport was established with the samples. Teachers also co-operated well.

DATA ANALYSIS

The data gathered were organized, tabulated and analyzed by using descriptive statistics (frequency, percentage, mean, median and standard deviation). To find out the effectiveness of video assisted teaching program inferential statistics (Chi-square, 't' test, co-relation co-efficient) is used to find out the association and relationship between knowledge and demographic variables.

PROTECTION OF HUMAN RIGHTS

The study was made after the approval of the dissertation committee. The nature and the purpose of the study were explained to the samples and oral consent was obtained in order to get their full co-operation. Confidentiality was strictly maintained throughout the study.

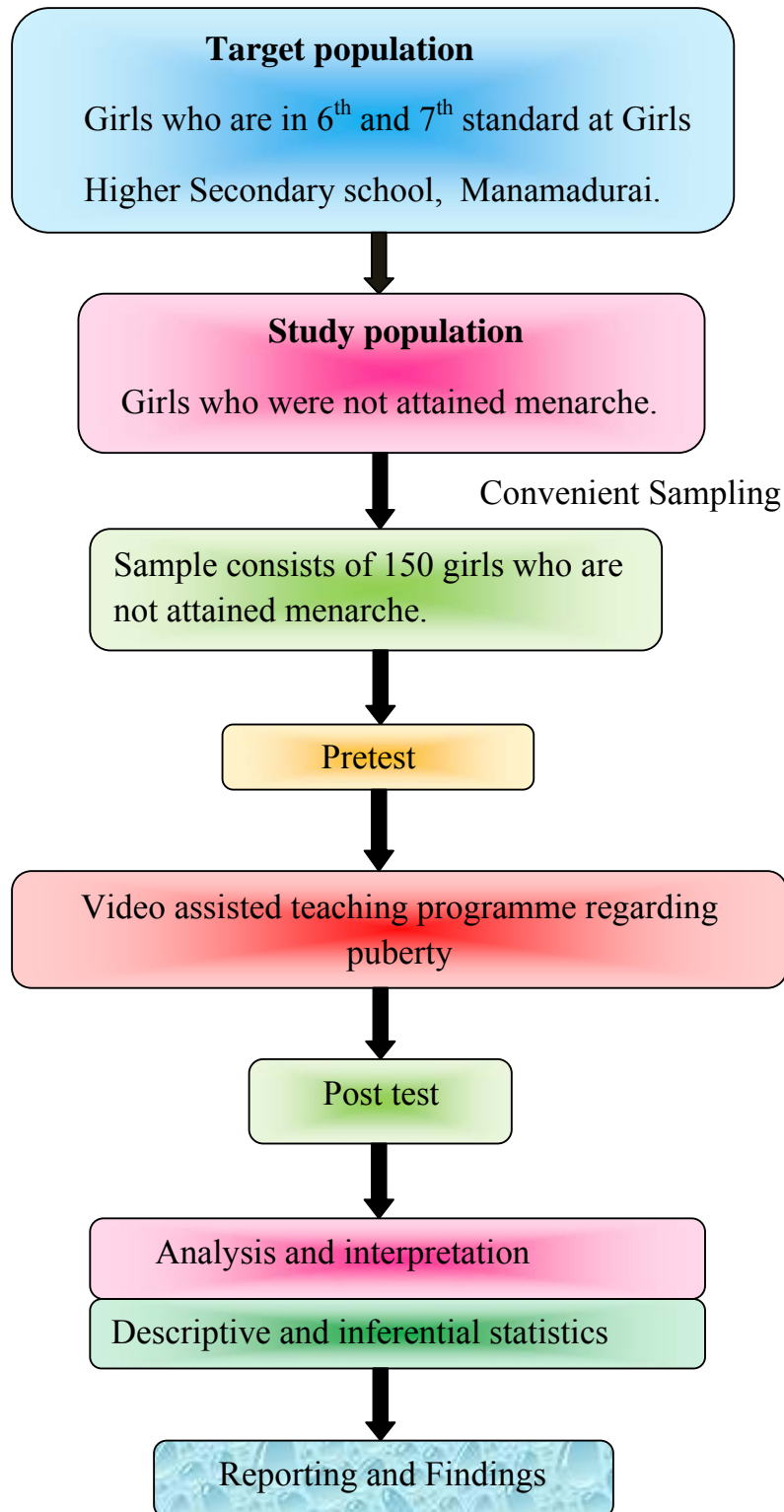


Fig.2 Schematic representation on data collection procedure

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with analysis and interpretation of data collected through a semi structured knowledge questionnaire to determine the effectiveness of video assisted teaching program on puberty.

According to **Seaman** and **Veronica** data analysis is the process by which the researcher summarizes and describes data and if possible, makes inference from the study sample to the population from which the sample was drawn. **Talbot** states that interpreting the findings are most challenging and least structured step in the research process. Interpreting rather than reporting research finding requires the investigator to be creative. Hence, in order to interpret the data in an intelligible form, the data were analyzed based on the objectives of the study, using both descriptive and inferential statistics. The SPSS computer package was used for the analysis.

OBJECTIVES OF THE STUDY

- ★ To assess the pre-test level of knowledge regarding puberty among girls in government school.
- ★ To assess the post-test level of knowledge regarding puberty among girls in government school.
- ★ To evaluate the effectiveness of the video teaching program on knowledge regarding puberty among girls in government school at Manamadurai.
- ★ To find out the association between pre-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, source of information and place of living.

- ★ To find out the association between post-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, birth order, religion, source of information and place of living.

PRESENTATION OF THE DATA

The analysis was organized and presented under the following headings.

Section – I

Distribution of samples according to the demographic variables.

Section – II

1. Distribution of pre-test level of knowledge score of samples.
2. Distribution of post-test level of knowledge score of samples.

Section – III

Difference between the pre-test and post-test knowledge score.

Section – IV

Association between post-test knowledge score and selected demographic variables (age, education, mother's education, mother's occupation, religion, type of family, birth order, source of information and place of living)

SECTION – I

Table No.1: Distribution samples according to their demographic variables.

n = 150

Demographic variables		Frequency	Percentage %
Age	10 years	17	11
	11 years	83	55
	12 years	45	30
	13 years	5	3
Education	6 th std	92	61
	7 th std	58	39
Mother's Education	Illiterate	29	19
	Primary	52	35
	Secondary	27	18
	Higher Secondary	41	27
	Degree	1	1
Mother's Occupation	House wife	84	56
	Employed	5	7
	Self – Employed	39	26
	Others	20	13
Type of Family	Joint family	47	31
	Nuclear family	100	67
	Extended family	3	2
Religion	Hindu	137	92
	Christian	5	3
	Muslim	2	1
	Others	6	4
Birth order	I	48	32
	II	62	42
	III	29	19
	IV	11	7
Source of information	Family	99	66
	Friends	18	12
	Peer Group	17	11
	All	16	11
Place of living	Urban	66	44
	Rural	84	56

Table -1 shows that, regarding age 17 (11%) girls were 10yrs, 83 (55%) were 11 years, 45 (30%) were 12 years and 5 (3%) were 13 years.

About educational status of girls, 92 (61%) were studying 6th standard and 58 (39%) were studying 7th standard.

With regard to mother's educational qualification, 29 (19%) were illiterate, 52 (35%) were educated up to primary school, 27 (18%) had secondary school education, 41 (27%) were educated up to higher secondary and 1 (1%) had a degree.

Regarding mother's occupation, 84 (56%) were house wife, 7 (5%) were employed, 39 (26%) were self employed and the remaining mothers 20 (13%) were doing other occupation.

Considering the type of family, 47 (31%) belonged to joint family, 100 (67%) were from nuclear family and 3 (2%) were from extended family.

About the religion, 137 (91%) were Hindus, 5 (3%) were Christian, 2 (1%) were Muslim and 6 (4%) were belong to other religion.

While considering the birth order, 48 (32%) were first born, 62 (41%) were second child, 29 (19%) were third child and 11 (7%) were a fourth child in their family.

Regarding source of information, 99 (66%) received information from TV, 18 (12%) were received from radio, 17 (11%) were received information from newspaper and 16 (11%) were received from all the above.

About the place of living, 66 (44%) were residing in urban area and 84 (56%) were residing in rural area.

Fig. 3: Distribution of samples according to their age. (n=150)

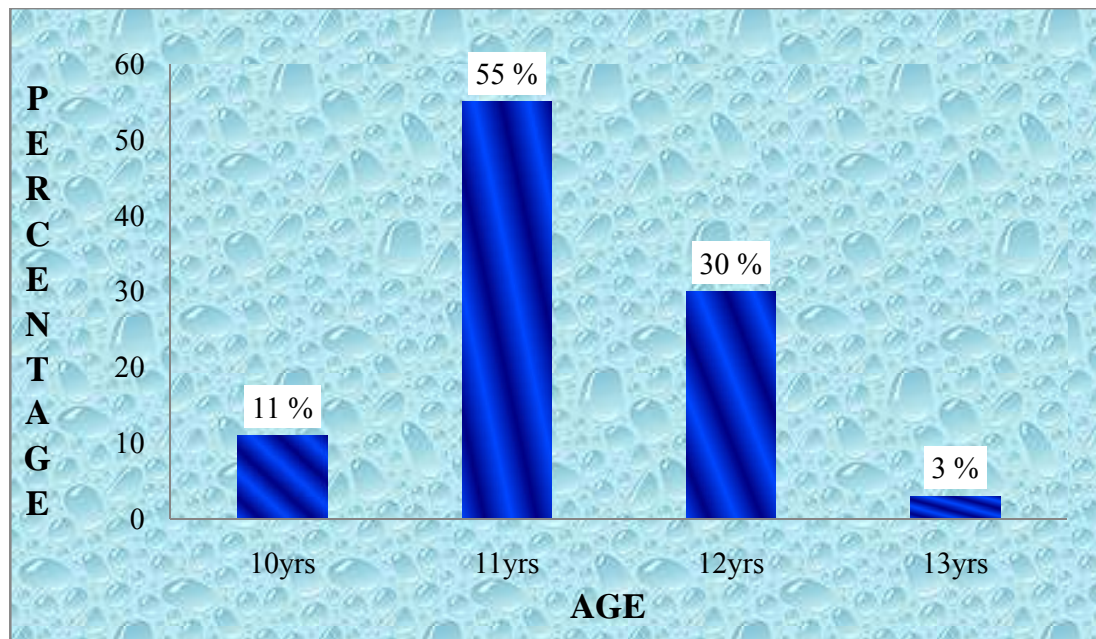


Fig. 4: Distribution of samples according to their educational status.

(n=150)

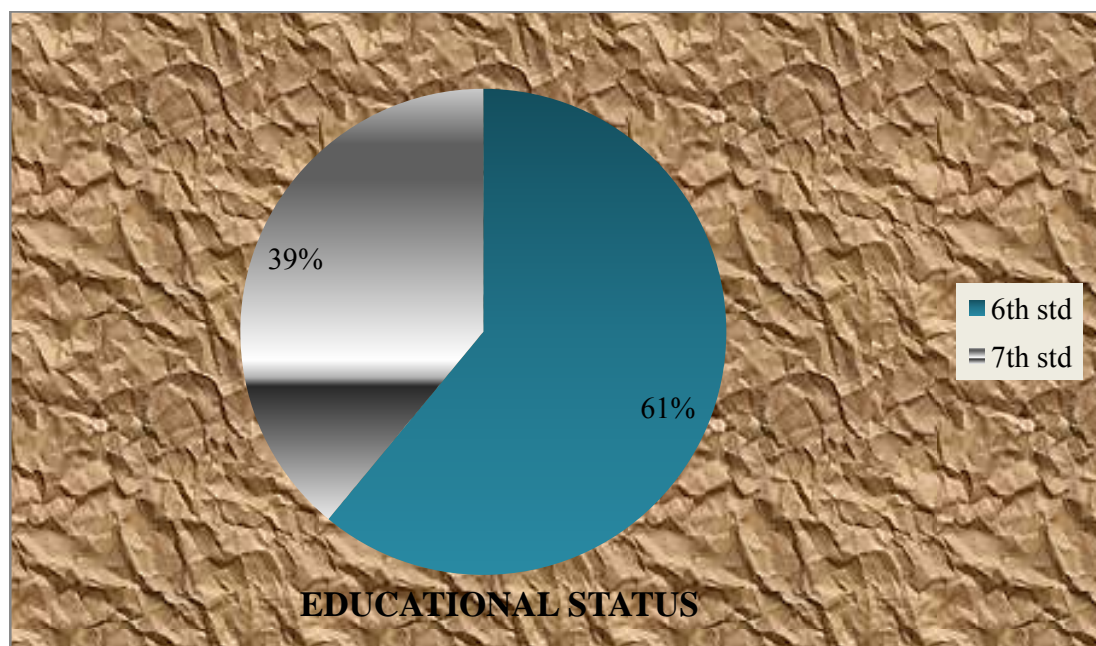


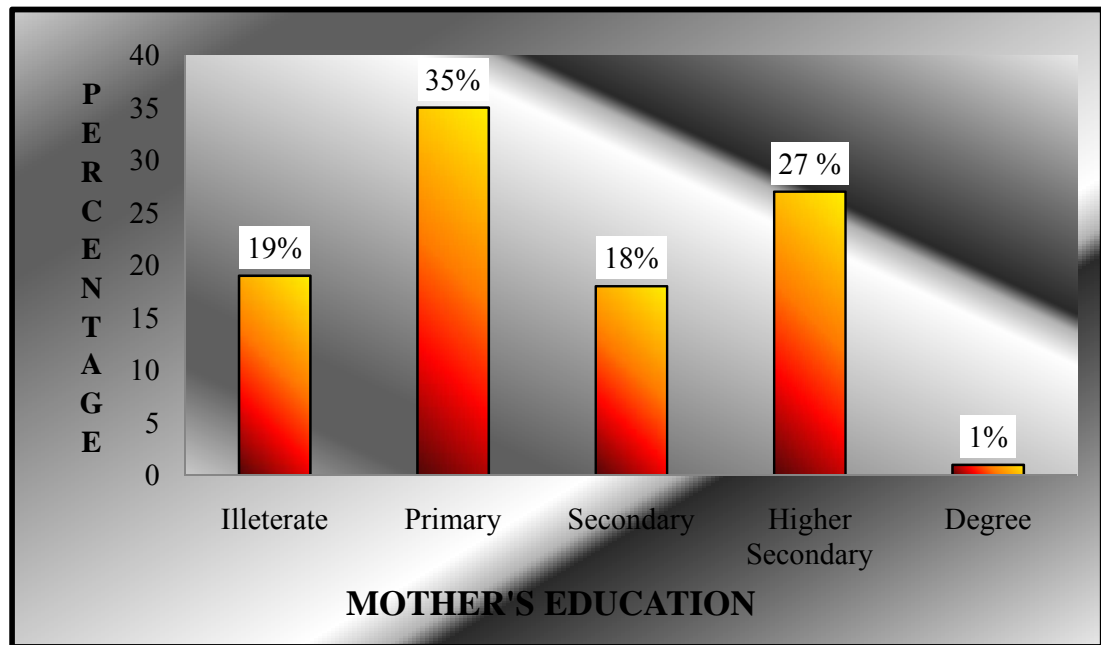
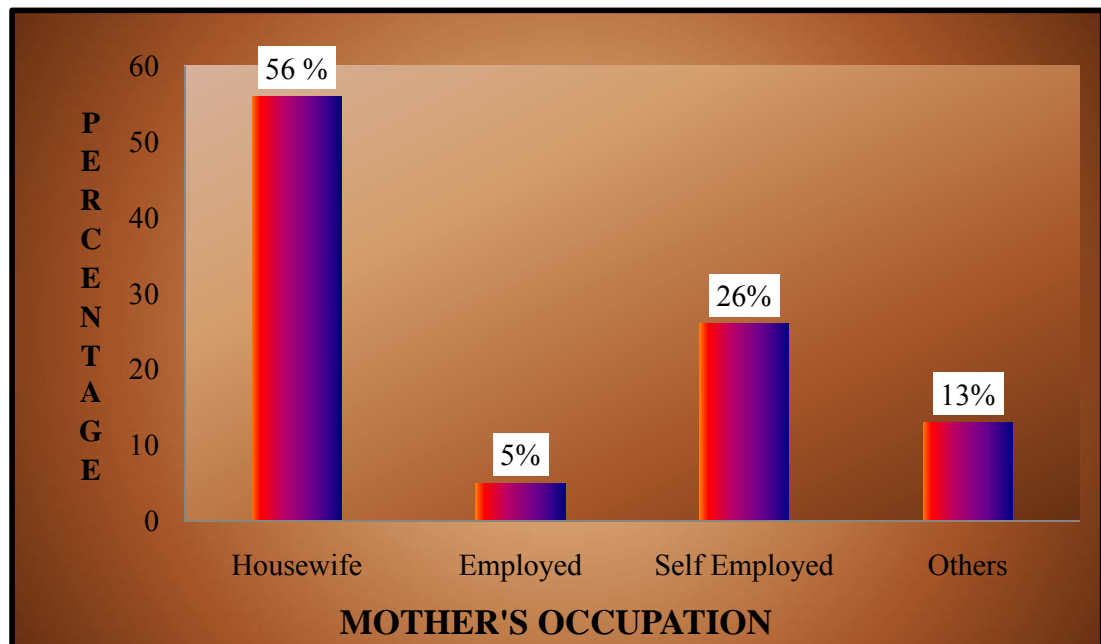
Fig. 5: Distribution of samples according to their mother's education.**(n=150)****Fig.6: Distribution of samples according to their mother's occupation****(n=150)**

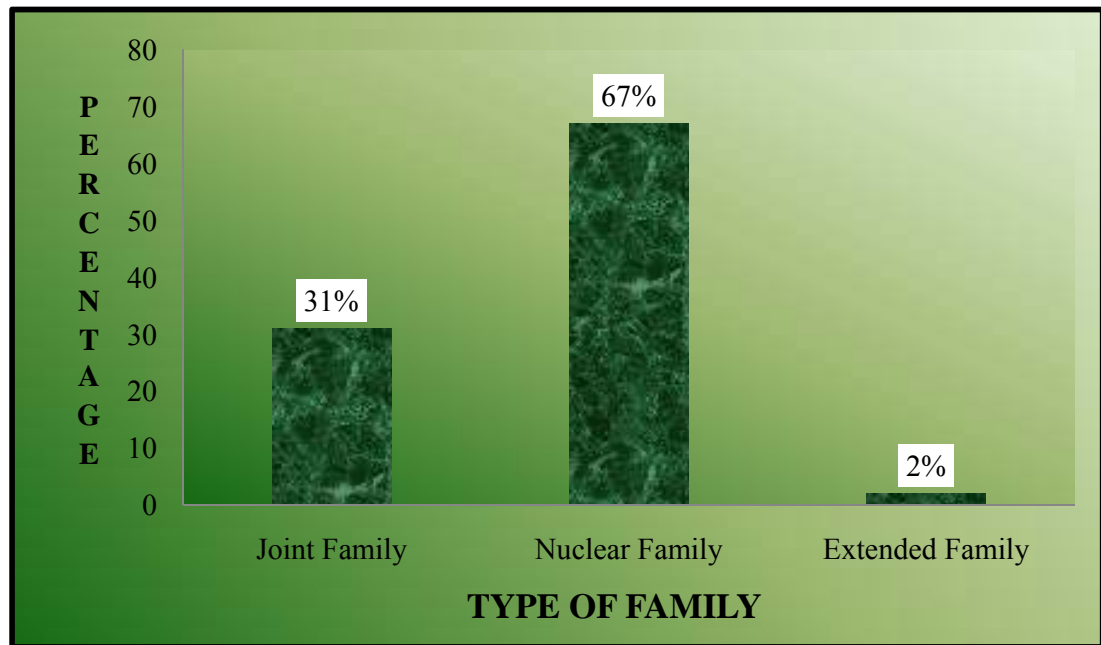
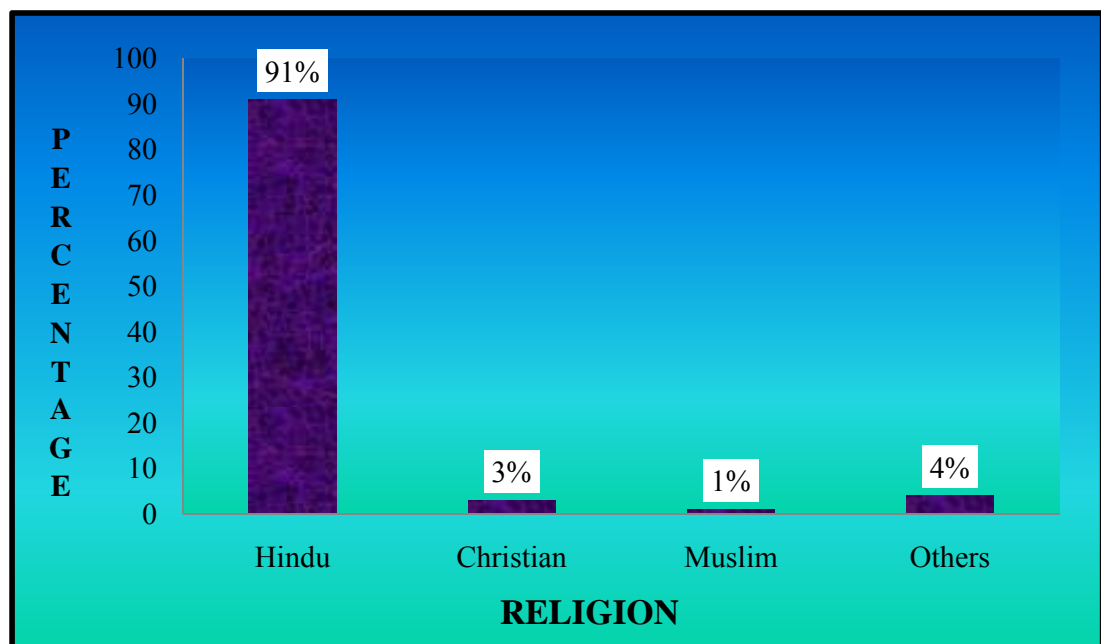
Fig.7: Distribution of samples according to their type of family.**(n=150)****Fig.8: Distribution of samples according to their type of religion.****(n=150)**

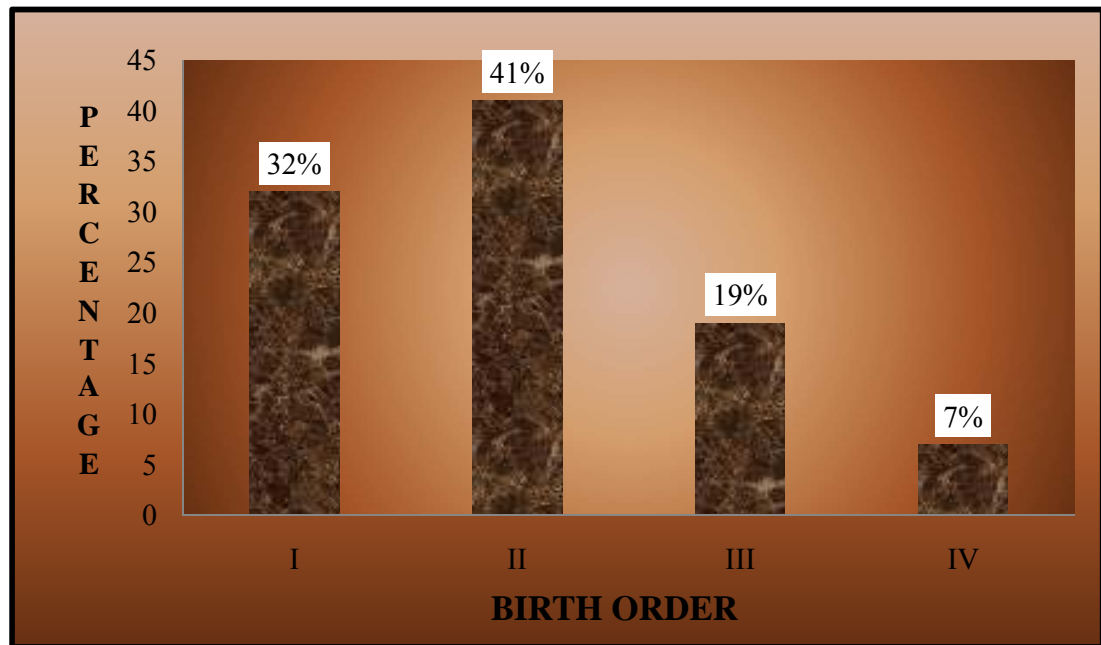
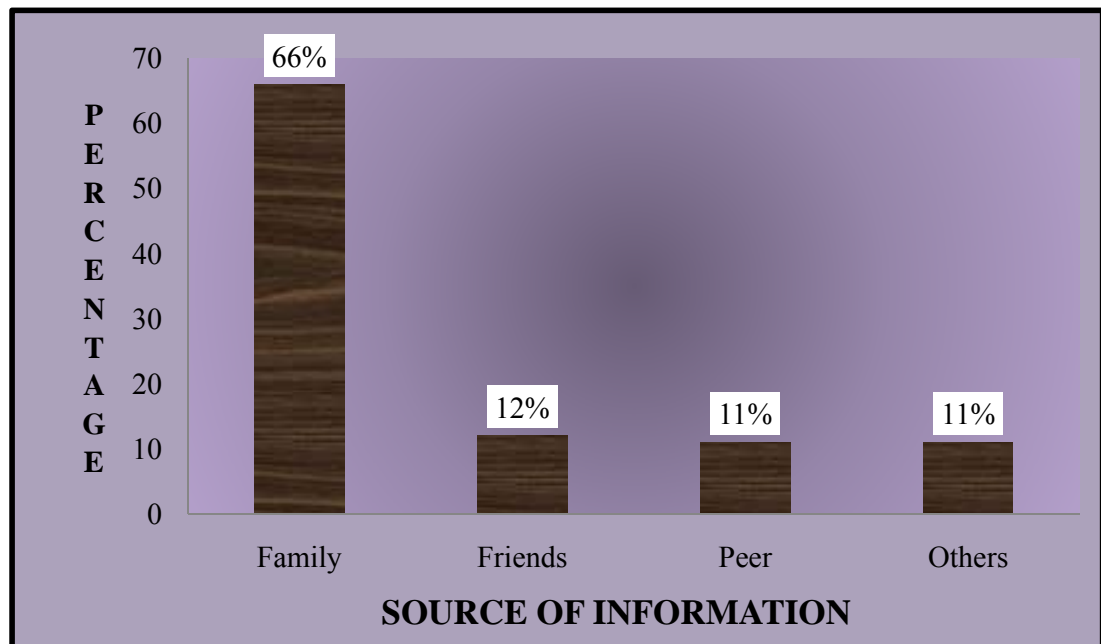
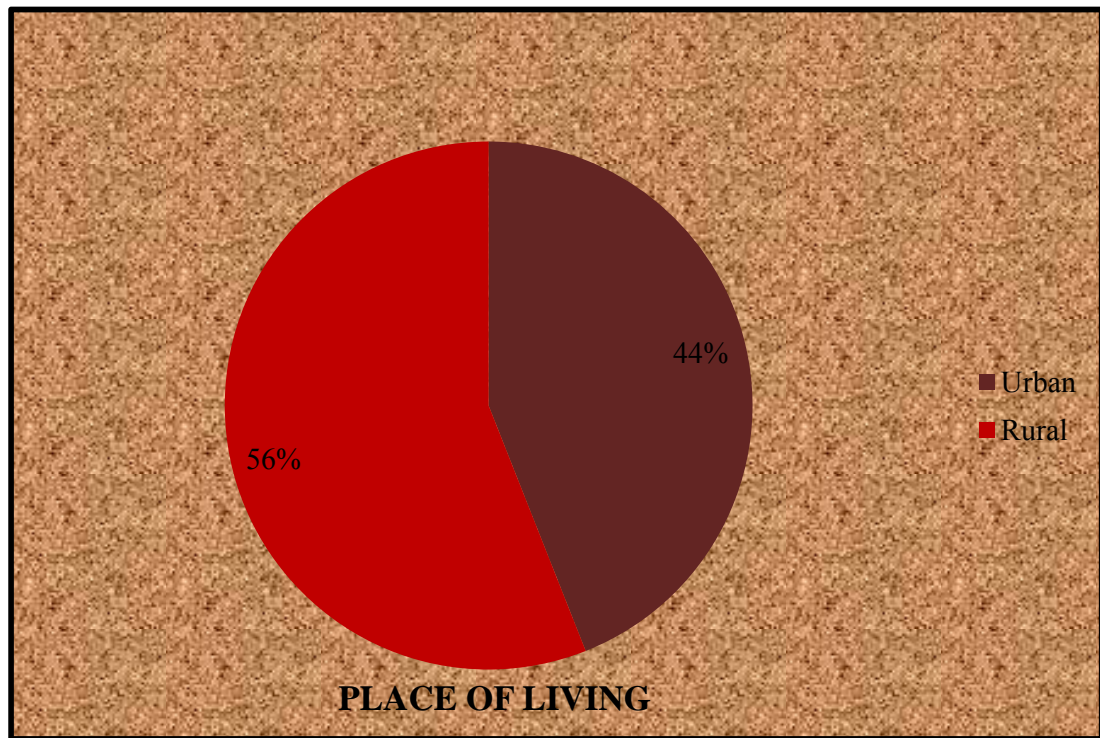
Fig.9: Distribution of samples according to their birth order.**(n=150)****Fig.10: Distribution of samples according to their source of information.****(n=150)**

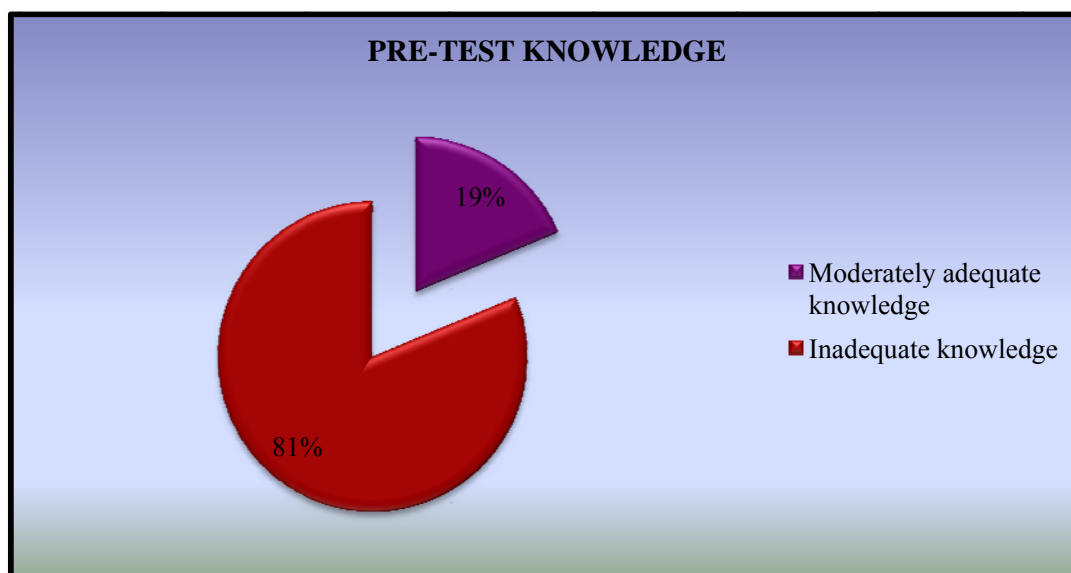
Fig.11: Distribution of samples according to their place of living.

(n=150)

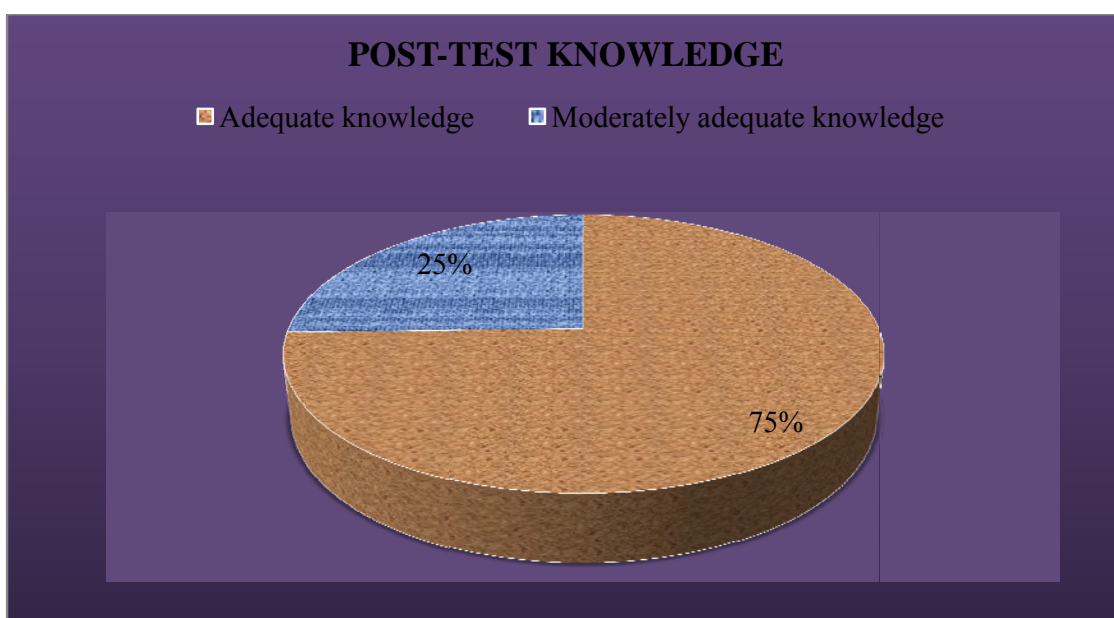


DISTRIBUTION OF KNOWLEDGE SCORE IN PRE-TEST AND POST-TEST**Fig.12: Distribution of pre-test knowledge of puberty among girls.**

(n=150)

**Fig.13: Distribution of Post-test knowledge regarding puberty among girls.**

(n=150)



SECTION III

This section deals with the difference between pre-test and post-test knowledge score.

Table no.3: Effectiveness of video assisted teaching on improving knowledge regarding puberty.

Categories	Mean	Standard Deviation	Paired 't' test	
			Calculated value	Table value
Pre test	10.14	2.51	44.458**	3.29
Post test	21.71	3.69		

p<0.001 highly significant

**** Highly significant**

Table 3 shows that the mean of post-test knowledge score (21.71) was significantly higher than that of pre-test mean score (10.14). In order to find out the significant difference between the mean of the pre-test and the post - test level of knowledge scores of the samples paired 't' test is used. The calculated value is 44.458 significant at 0.001% level. Since the calculated value is higher than the table value, the researcher concluded that the video assisted teaching program will definitely improve knowledge.

Table No.4: Area wise comparison of pre-test and post-test scores for correct response regarding puberty among girls

(n=150)

Areas of puberty	Pretest	posttest	Effectiveness
Anatomy and physiology	39%	66%	27%
Menstruation	25%	70%	45%
Pubertal changes	27%	56%	29%
Menstrual hygiene	31%	67%	36%

The above table shows that the pre-test and post-test knowledge score of girls on puberty; there is enhancement of knowledge in all the aspect of post-test.

Table No .5: Item wise comparison of pre-test and post-test scores for correct response regarding anatomy and physiology:

(n=150)

Item wise	Pre-test	Post-test	Effectiveness
1. The internal reproductive organs are situated within the bony pelvis.	28%	52%	24%
2. Internal reproductive organ comprises of Uterus, uterine tubes, ovaries, vagina.	21%	56%	35%
3. Function of uterus is development of baby.	68%	89%	21%
4.The ovaries produce Egg (female egg)	48%	91%	43%
5. Menstrual flow drains from the uterus through the vagina	19%	43%	24%

Pre-test finding reveals that (68%) of the subjects had knowledge about the item “Function of the uterus is development of baby”. The least percentage of the subjects had (19%) knowledge about the item “Menstrual flow drains from the uterus through the vagina” in the pre test.

Percentage distribution reveals that among the above item highest percentage of effectiveness (43%) was observed in the item, “The ovaries produce Egg (female egg). 21% of effectiveness was observed in the item “Function of uterus development of the baby.

Table No .6: Item wise comparison of pre and post-test scores for correct response regarding menstruation

(n=150)

Item wise	Pre-test	Post-test	Effectiveness
6. The common sign of ovulation is pain in one side of the abdomen.	33%	73%	40%
7. The unfertilized egg discharged as menstrual blood through the vagina is called as menstruation.	25%	83%	58%
8. The content of menstrual flow include blood, fluids, shed ovum.	21%	43%	22%
9. The duration of normal menstrual bleeding cycle is 3-5 days.	21%	83%	62%

Pre-test findings reveal that (33%) of the subjects had knowledge about the item “The common sign of ovulation is pain in one side of the abdomen”. The least percentage of the subjects (21%) had knowledge about the item “The content of menstrual flow include blood, fluids, shed ovum and the duration of normal menstrual bleeding cycle is 3-5 days.

Percentage distribution reveals that among the above items higher percentage of effectiveness (62%) was observed in the item “The duration of normal menstrual bleeding cycle is 3-5 days”. The lowest score 22% of effectiveness was observed in the item “The content of menstrual flow include blood, fluids, shed ovum”.

Table No .7: Item wise comparison of pre and post-test scores for correct response regarding pubertal changes:

(n=150)

Item wise	Pre-test	Post-test	Effectiveness
10. The average age puberty begins 10- 14yrs	43%	78%	35%
11. Early puberty for a girl starts at when she is 8years.	11%	25%	14%
12. White discharge will be present before menstruation.	25%	57%	32%
13. Pubertal changes in girls are except voice changes.	21%	47%	26%
14. The first sign of puberty for girls is usually breast budding.	29%	48%	19%
15. Teens begin to get acne because hormonal changes.	15%	76%	61%
16. Reducing mood swings during puberty.	19%	31%	12%
17. Teens need 9 hours of sleep per night.	35%	71%	36%
18. The best way to reduce the body smell.	13%	30%	17%
19. Puberty begins first in girls.	61%	94%	33%

Pre-test findings reveal that (61%) of the subjects had knowledge about the item “Puberty begins first in girls” and the least percentage of the subjects (11%) had knowledge about the item “Early puberty for a girl starts at when she is 8years”.

Percentage distribution reveals that among the above items highest percentage of effectiveness (61%) was observed in the item “Teens begin to get acne because hormonal changes”. 12% of effectiveness was observed in the item “Reducing mood swings during puberty”.

Table No .8: Item wise comparison of pre and post-test scores for correct response regarding menstrual hygiene:

Item wise	Pre-test	Post-test	Effectiveness
20. Common premenstrual manifestation is except, headache.	28%	44%	16%
21.Methods to reduce premenstrual syndrome exercise and others.	17%	29%	12%
22. The ideal material to be used during menstruation is sanitary napkin.	25%	78%	53%
23. During menstruation the perineum needs to be washed Every time after attending toilet.	27%	74%	47%
24. The pad should be changed every 4-6hrs.	23%	61%	38%
25. Perineal area should be clean from front to back.	38%	63%	25%
26. Methods to wash the panties soak in plain water before wash with soap and dry it under sunlight.	47%	92%	45%
27. Burning is the method for disposing the soiled napkin.	27%	58%	31%

28. The important nutrient lost through menstrual blood is iron.	29%	71%	42%
29. The diet to be included during menstruation Iron rich diet, fruits with normal diet.	41%	78%	37%
30. Iron rich diet includes ragi, jiggery, spinach.	43%	77%	34%
31. During menstruation girls can take bath twice a day.	44%	84%	40%
32. Do moderate exercise during menstruation	29%	53%	24%
33. Ways to relieve menstrual pain	21%	43%	22%
34. Usually menstruation occurs once in 28 days.	21%	95%	74%

Pretest findings reveal that (47%) of the subjects had knowledge about the item” Methods to wash the panties, soak in plain water before wash with soap and dry it under sunlight” and the least percentage of the subjects (17%) had knowledge about the item “Methods to reduce premenstrual syndrome exercise and others”.

Percentage distribution reveals that among the above items higher percentage of effectiveness (74%) was observed in the item “Usually menstruation occurs once in 28 days”. 12% of effectiveness was observed in the item “Methods to reduce premenstrual syndrome exercise and others”.

SECTION IV

This section deals with the association between pre-test knowledge scores and with their selected demographic variables.

Table No 9: Associations between pre-test knowledge score and demographic variables

(n=150)

Sl. No	Demographic variables	Level of knowledge				Chi square	
						Table value	Calculated value
		Inadequate		Moderately adequate			
		f	%	f	%		
1.	Age a. 10 b. 11 c. 12 d. 13	12 74 32 4	8 49 21 3	5 9 13 1	3 6 9 1	7.81	7.742
2.	Educational status a. 6 th std b. 7 th std	80 42	53 28	12 16	8 11	3.84	4.95*
3.	Mother's education a. illiterate b. Primary c. Secondary d. Higher secondary e. Degree	21 42 27 32 0	14 28 18 21 0	8 10 0 9 1	5 7 0 6 1	9.49	12.376*
4.	Mother's Occupation a. House wife b. Employed c. Self employed d. Others	64 6 34 18	43 4 23 12	20 1 5 2	13 1 3 1	7.81	3.419

Table 9 contd...

5.	Type of family						
	a. Joint family	38	25	9	6		
	b. Nuclear family	82	55	18	12		
	c. Extended family	2	1	1	1	5.99	0.462
6.	Religion						
	a. Hindu	114	76	23	15		
	b. Christian	2	1	3	2		
	c. Muslim	1	1	1	1	7.81	7.254
	d. others	5	3	1	1		
7.	Birth order						
	a. I	40	27	8	5		
	b. II	52	35	10	6		
	c. III	21	14	8	5	7.81	1.911
	d. IV	9	6	2	1		
8	Exposure to media						
	a. TV	82	55	17	11		
	b. Radio	12	8	6	4		
	c. Newspaper	15	10	2	1	7.81	3.229
	d. All	13	9	3	2		
9	Place of living						
	a. Urban	50	33	16	11		
	b. rural	72	48	12	8	3.84	2.413

Significant at 0.05% level

*** Significant**

Table 9: shows that there is a significant association between the pre-test knowledge and the selected demographic variables such as education and mother's education. It is also found that there is no association between the pre-test knowledge and the demographic variables such as age, mother's occupation, type of family, religion, birth order and source of information and place of living.

Table 10: Associations between post-test knowledge score demographic variables.

(n=150)

Sl. No	Demographic variables	Level of knowledge				Chi-square	
						Table value	Calculated value
		Moderately adequate		Adequate			
		f	%	f	%		
1.	Age a . 10 b. 11 c . 12 d . 13	6 39 12 1	4 26 8 1	11 44 33 4	7 29 22 3	7.81	5.97
2.	Educational status a. 6 th std b. 7 th std	43 15	29 10	49 43	33 29	3.84	6.538*
3.	Mother's education a. illiterate b. Primary c. Secondary d. Higher secondary e. Degree	8 18 14 18 0	5 12 9 12 0	21 34 13 23 1	14 23 9 15 1	9.49	4.945
4.	Mother's Occupation a. House wife b. Employed c. Self employed d. Others	34 2 14 8	23 1 9 5	50 5 25 12	33 3 17 8	7.81	0.558

Table 10 contd...

5.	Type of family						
	a. Joint family	20	13	27	18		
	b. Nuclear family	38	25	62	41	5.99	2.209
	c. Extended family	0	0	3	2		
6.	Religion						
	a. Hindu	52	35	85	57		
	b. Christian	2	1	3	2		
	c. Muslim	1	1	1	1	7.81	0.466
	d. others	3	2	3	2		
7.	Birth order						
	a. I	19	13	29	19		
	b. II	25	17	37	25	7.81	1.015
	c. III	9	6	20	13		
	d. IV	5	3	6	4		
8	Exposure to media						
	a. TV	43	29	56	37		
	b. Radio	5	3	13	9	7.81	3.191
	c. Newspaper	6	4	11	7		
	d. All	4	3	12	8		
9	Place of living						
	a. Urban	20	13	46	31		
	b. rural	38	25	46	31	3.84	3.476

Significant at 0.05% level

*** Significant**

Table 10 shows there is a significant association between post-test knowledge and selected demographic variable education. This table also shows that there is no significant association between the post-test knowledge and demographic variables such as age, mother's education, occupation, type of family, religion, birth order, source of information and place of living.

CHAPTER V

DISCUSSION

The aim of the study was to evaluate the effectiveness of video assisted teaching program on puberty among school girls.

The research design of the study was pre experimental one group pre-test post-test design. The setting of the study was the Government Girl's Higher Secondary School, Manamadurai. The sample size was 150.

The findings of the study have been discussed with reference to the objectives, the framework and hypotheses of this study.

OBJECTIVES OF THE STUDY

The objectives of the study were discussed of following.

1. To assess the pre-test level of knowledge regarding puberty among girls in government school.
2. To assess the post-test level of knowledge regarding puberty among girls in Government school.
3. To evaluate the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in the Government school at Manamadurai.
4. To find out the association between pre-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.
5. To find out the association between post-test level of knowledge and the selected demographic variables such as age, education, mother's education, mother's occupation, type of family, religion, birth order, source of information and place of living.

The first objective was to assess the pre-test level of knowledge regarding puberty among girls.

Table No.2 Showed that 18.67% girls have moderately adequate knowledge and 81.33% had inadequate knowledge on puberty in pre-test. This indicates the need for the teaching program for girls.

Area wise analysis of knowledge scores among girls regarding puberty

Analysis revealed that the highest score (39%) of correct responses observed in Anatomy and physiology and lowest score (25%) of correct responses observed regarding menstruation. This indicates that awareness of puberty and menstrual hygiene is very poor. Repeated teaching can improve the knowledge regarding puberty.

Item wise analysis of knowledge scores of girls regarding puberty

Item wise analysis revealed that the majority of (68%) correct responses observed in the item “Function of the uterus is development of baby” and 61% of the subjects had knowledge about the item “Puberty begins first in girls”. These two items are commonly known by the samples through family members and media.

Lowest score observed in the items being 11% “ Early puberty for a girl starts at when she is 8years”. 19% of the respondents responded correctly to item no 5 that is “Menstrual flow drains from the uterus through the vagina” and 17% had knowledge about the item “Methods to reduce premenstrual syndrome exercise and others”. The investigator observed inadequate knowledge about anatomy and physiology, pubertal changes and menstrual hygiene. It will be better if anatomy and physiology of the female reproductive system is added in the school curriculum and prior information about menstruation could be given to prepare the girl child

mentally to accept the change in a constructive way and help her to develop a better attitude.

This study was similar to that of **Abioje et al (2000)** conducted a study on menstrual knowledge and practice among secondary girls with the aim of acute need for education and psychological preparation of girls regarding menstruation. The study found that 66.3% were using insanitary materials, 95.2% need education and psychological preparation of girls regarding menstruation well ahead of menarche. The above findings highlight the need for health education among girls so as to increase awareness and knowledge regarding puberty.

The second objective is to assess the post-test level of knowledge on puberty among girls after video assisted teaching program.

Table No.2 Showed that 74.67% girls had adequate knowledge and 25.33% moderately adequate knowledge after video assisted teaching program.

This study was similar to that of P.R. Deshmukh et al (2007) he reported that after 3 years of community based health education intervention on menstrual hygiene, significantly more adolescent girls (55%) were aware of menstruation before its initiation compared with baseline (35%). The practice of using ready-made pads increased significantly from 5% to 25% and reuse of cloth declined from 85% to 57%. The trend analysis showed that adolescent girls perceived a positive change in their behavior and level of awareness.

The third objective was to evaluate the effectiveness of video assisted teaching program on knowledge regarding puberty among girls.

H_1 – There will be a significant difference between pre-test and the post - test level of knowledge score after video assisted teaching program.

Table 3 showed that the mean post-test knowledge score (21.71) was higher than that of pre-test knowledge score (10.14). The calculated paired 't' test value was (44.458) more than the table value at df (149) 3.39. This indicates that there is a significant difference between pre-test and post-test knowledge score, which means that video assisted teaching program influences the gain of knowledge among girls. Hence the researcher accepts the research hypotheses.

This study was supported by **Rao RS, Lena A, (2008)**. They reported that desirable changes in knowledge among adolescence girls were found regarding reproductive health, after an educational information program.

The fourth objective was to find out the association between pre-test level of knowledge and the selected demographic variables.

H_2 – There is a significant association between the pre-test knowledge score and selected demographic variables such as age, education, mother's education, occupation, religion, type of family, birth order, source of information and place of living.

Table 9 showed that there was no significant association between pre-test level of knowledge and demographic variables such as age, mother's occupation, religion, type of family, birth order, source of information and place of living. There was a significant association between the pre-test knowledge score and demographic variables such as education and mother's education.

The fifth objective was to find out the association between post-test level of knowledge and the selected demographic variables.

H₃ – There is a significant association between the post-test level knowledge score and selected demographic variables such as age, education, mother's education, occupation, religion, type of family, birth order, source of information, place of living.

Table 10 showed that there was no significant association between post-test level of knowledge and demographic variables such as age, mother's education, occupation, religion, type of family, birth order, source of information and place of living. There is a significant association between the post-test knowledge score and education. Since the calculated chi-square value is higher than the table value.

CHAPTER VI

SUMMARY AND RECOMMENDATIONS

This chapter presents the summary, major findings, implications, recommendations of the study and conclusion.

SUMMARY

Pubertal changes and menarche are a normal physiological cycle, common to all females of the reproductive age group. The initiation of menarche takes place in the early adolescence period. Though it is a normal phenomenon, many studies conducted in India and Abroad have revealed that menstruation is associated with several physical and psychological problems which are merely to be complicated by a confused state caused by incomplete and wrong information among adolescence about pubertal changes and menstruation.

Though a higher percentage of adolescent girls are continuing to go to school today, they get very little guidance and teaching regarding pubertal changes and menarche. The aim of the study was to evaluate the effectiveness of the video assisted teaching program on knowledge regarding puberty girls.

A review of related literature enabled the investigator to develop the conceptual framework, methodology for the study and plan for analysis of data in an effective and efficient way. The conceptual framework adopted for this study was based on modified **Ludwig Von Bertalanffy's**. The General system theory focuses on providing knowledge regarding puberty.

A structured knowledge questionnaire was developed for assessing the knowledge. The video assisted teaching program was developed and

evaluated. Government Girl's higher secondary school Manamadurai was selected as the setting of the study. By convenient sampling technique 150 samples from Government Higher Secondary School were taken for this study based on the inclusion criteria. Method of data collection for this study includes, the knowledge questionnaire was distributed to samples; meanwhile their doubts were also cleared. Each day the data was collected from 10-15 samples. After receiving the questionnaire, video assisted teaching was given which prepared by the investigator for 45 minutes. After 15 days post-test was done.

Based on the objectives and the hypotheses, the data were analyzed using both descriptive and inferential statistics. The descriptive statistics like frequency, mean and standard deviation were used. Graphical representation was done in terms of bar graph and pie diagram. Inferential statistics such as paired 't' test and chi-square were used to test the hypotheses. The level of significance for test the hypotheses were 0.001 and 0.05%.

MAJOR FINDINGS OF THIS STUDY

- ★ 81.33% had inadequate knowledge and 18.67% had moderately adequate knowledge in pre-test.
- ★ 74.67% had adequate knowledge and 25.33% had moderately adequate knowledge in post-test.
- ★ The mean post-test knowledge score was significantly higher than the mean pre-test knowledge score at 0.001 level. This indicated that the video assisted teaching program has helped the samples to improve their knowledge on puberty.

- ★ There was a significant association between pre-test knowledge level and demographic variables such as education and mother's education.
- ★ There was a significant association between post-test knowledge level and demographic variable education.

LIMITATIONS

- ↗ Extraneous variables like age, mother's education, occupation, type of family, birth order, religion, source of information and place of living were beyond the investigator's control.
- ↗ Due to time constraints, 150 samples were selected as a sample. Therefore generalization is limited.
- ↗ The sampling technique used was convenient sampling, which limits the generalization to large populations with similar characteristics.

IMPLICATIONS

Puberty is one of the major physiological changes taking place in adolescent girls. In order to prepare the adolescent girls for this major event in their life, it is essential to educate the girls regarding puberty and menstrual hygiene. There is a need for health personnel take active part in preparing the pre-adolescent girls in puberty. Health Education programs on puberty and menstrual hygiene for adolescent girls help in maintaining healthy practices during menstruation also provides psychological support.

The findings of this study have implications in various areas of nursing practice, nursing education, nursing administration and nursing research.

NURSING IMPLICATIONS

NURSING PRACTICE

- ✦ The nurses come across people of all age groups during their course of study as well as services. It is one of the responsibilities of a nurse to equip herself with updated knowledge of self care practices during menstruation so that she will be able to impart her knowledge to adolescent girls. It is equally important for nurses to practice hygienic behavior.
- ✦ School health program includes all activities that contribute to the initiation, maintenance and improvement on health of school children. These include health learning and health practices during school hours and health services.
- ✦ It provides all round development of child's physical, mental, social, emotional and moral well-being. Puberty and menstrual hygiene is an aspect which is often being neglected by many parents and teachers.
- ✦ The pre-adolescent girls may not be aware of puberty and menstrual hygiene. Health education should focus on actual experience of living healthy and happily with other children in a safe school environment.
- ✦ It is the responsibility of the nurse educator to plan and conduct group teaching on puberty and to prepare the children physically and emotionally.
- ✦ The structured teaching program can be given repetitively among pre-adolescent girls.

NURSING EDUCATION

- ✚ Educational program on puberty help the pre-adolescent girls to prepare themselves for one of the important events in their life i.e., menarche.
- ✚ Education helps the individual to learn new things and thereby it plays an important role in changing behavior of the learner.
- ✚ During basic nursing education, research work may be done by the students to find out the knowledge level of pre-adolescent girls regarding puberty in schools during school health services. After that particular school will be provided awareness regarding puberty.
- ✚ Nurses at postgraduate level need to develop various skills in preparing the different audio visual aids for health teaching according to the participant's level.
- ✚ Education on puberty helps the nursing students to prepare themselves and also the pre-adolescent girls in puberty.
- ✚ The nurse educator with the help of the school authorities conduct parent – teacher meetings in which she can explain the importance of educating the school children regarding normal anatomy and physiology of the female reproductive system, menstrual cycle, premenstrual syndrome and menstrual hygienic practices to prepare them for puberty. She can also explain to the parents how to prepare their daughters for this normal life event.

NURSING ADMINISTRATION

- ✚ The nurse administrator should take interest in providing information on normal anatomy and physiology to pre-adolescent and adolescent girls, in order to make them understand that

menstruation is a normal process. It can be done in hospital and community setting.

- ✦ The nurse administrator should plan to organize educational programs for nursing personnel, in order to prepare them to impart knowledge to the pre-adolescent girls.
- ✦ It is the responsibility of the nurse educator to motivate the nursing personnel to participate and conduct health education programs on various aspects of life.

NURSING RESEARCH

- ✦ The result of the present study shows that the apparent knowledge deficit of the pre-adolescent girls regarding puberty and it highlights the effectiveness of video assisted teaching program on puberty.
- ✦ The nurse teacher should focus on conducting research to find out the knowledge level of the pre-adolescent girls and make use of newer methods of teaching, focusing on interest, quality and cost effectiveness.

RECOMMENDATIONS

On the basis of the findings of the study, it is recommended that

- ❖ A similar study could be replicated with a larger sample.
- ❖ A study may be conducted to assess the knowledge among school teachers regarding puberty.
- ❖ A comparative study may be done regarding knowledge on puberty between adolescent girls, who attained menarche and pre-adolescent girls, who have not attained menarche.

- ❖ A comparative study may be done between rural and urban pre-adolescent girls regarding knowledge and expectations of puberty.
- ❖ A longitudinal study could be done on the effectiveness of pre-menarcheal training among adolescents who after attaining menarche.

CONCLUSION

The present study finding shows that the samples who were attending the video assisted teaching program have shown improvement in the level of knowledge which was proved statistically. The respondents expressed their gratitude for the knowledge they gathered regarding puberty. This feedback led the future researcher to use the questionnaire as a guide for assessing knowledge on puberty. The Headmistress and teachers were appreciated the topic and video compact disc.

Video assisted teaching method was very much encouraging among the school girls rather than other methods. It is necessary to learn about puberty for the girls who attend menarche. Series of teaching on the same aspect of all school girls will be improve their knowledge as well as improve their physical and mental health.

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APPENDIX – I

LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

From

The Principal,
Matha College of Nursing,
Vaanpuram, Manamadurai - 630 606.

To

Respected Sir/Madam,

Sub: Regarding project work of M.Sc., (N) Student- Matha College of Nursing, Manamadurai.

One of our final year M.Sc., (N) student **R. Anitha**, Matha College of Nursing, Manamadurai has to conduct a project for the partial fulfillment of university requirement.

The topic of study is” **“A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in Government Girls Higher Secondary school in Manamadurai at Sivagangai District, Tamil Nadu.”**

Kindly permit her to do the research work in your esteemed school, Manamadurai and give her valuable guidance and suggestions.

Thanking You,

Place : Manamadurai
Date :

Yours faithfully,

Prof.Shabera Banu, M.Sc.,(N),Ph.D
Principal

APPENDIX - II

A letter seeking experts and opinion for content validity of the tool

From

R. Anitha,
M.Sc. Nursing II Year,
Matha College of Nursing,
Manamadurai.

To

Respected Madam / Sir,

SUB: Requesting expert opinion and suggestion for content validity.

I am a final Year student of Master of Nursing in Matha College of Nursing, Manamadurai. In partial fulfillment of Master degree in Nursing, I have selected the topic mentioned below for the research project to be submitted to Dr. M.G.R Medical University, Chennai.

“A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school in Manamadurai, Sivagangai District, Tamilnadu.

I request you to kindly validate the tool and give your expert opinion for necessary modification and also I would be very grateful, if you could improve the problem statement and objectives.

Encl:

- Demographic Performa
- Structured Questionnaire.
- Structured Teaching program

Thanking you.

Place: Manamadurai

Date:

Yours Sincerely,

R. Anitha,

APPENDIX-III

CERTIFICATE FOR VALIDATION

This is to certify that the tool developed for data collection by **Mrs. ANITHA .R.** Final year student of Matha College of nursing, Manamadurai (affiliated to Dr. MGR medical university) is validated and can proceed with this tool and conduct the main dissertations entitled “A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school in Manamadurai, Sivagangai District, Tamilnadu”.

Date

Signature

APPENDIX – IV

LIST OF EXPERTS

Dr. Anne George, M.B.B.S., M.D.,
Medical Guide,
Christian Fellowship Hospital,
Oddanchatram.

Prof. Grace Kingston MSc (N).,
Principal,
College of Nursing,
Ambilikkai.

Prof. Mrs. Suguna, M.Sc (N)., PhD.,
Vice Principal,
Nehru Nursing College,
Vallioor.

Prof. Mrs. Helen Rajamanikam, M.Sc., (N)
HOD Community Health Nursing,
Matha College of Nursing,
Manamadurai.

Prof. Mrs. Thamarai Selvi, MSc(N)., PhD
Vice Principal, maternity Nursing,
Matha college of Nursing
Manamadurai.

Prof. Mrs. Saraswathy, MSc(N)., PhD
Pediatric Nursing,
Matha College of Nursing
Manamadurai.

APPENDIX-V

INFORMED CONSENT

I Mrs. Anitha R. II year M.Sc Nursing, in the Matha college of Nursing, Manamadurai conducting a study “A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school in Manamadurai, Sivagangai District, Tamilnadu” as a partial fulfillment of the requirement for the degree of M.Sc (Nursing) under the Tamil Nadu Dr. M.G.R. Medical University. The study participants will be assessed by self-structured knowledge questionnaire to assess the knowledge regarding puberty. I assure you that the response given by you will be kept confidential .So, I request you to kindly cooperate with me and participate in this study

Thanking you,

APPENDIX-VI
CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation work “A study to determine the effectiveness of video assisted teaching program on knowledge regarding puberty among girls in selected school in Manamadurai, Sivagangai District, Tamilnadu”, done by Mrs. Anitha. R, II year M.Sc, Nursing, in the Matha college of nursing, Manamadurai is edited for the English language is appropriate.

Signature:

APPENDIX - VII
SECTION – A
DEMOGRAPHIC DATA

Please read every question carefully and answer the correct response.

Serial number:

1. Age
 - a. 10
 - b. 11
 - c. 12
 - d. 13

2. Educational status
 - a. 6th std
 - b. 7th std

3. Mother's education
 - a. illiterate
 - b. Primary
 - c. Secondary
 - d. Higher secondary
 - e. Degree

4. Mother's Occupation
 - a. House wife
 - b. Employed
 - c. Self employed

5. Type of family
 - a. Joint family
 - b. Nuclear family
 - c. Extended family

6. Religion

- a. Hindu
- b. Christian
- c. Muslim
- d. Others

7. Birth order

- a. I
- b. II
- c. III
- d. IV

8. Source of information

- a. Family
- b. Friends
- c. Peer group
- d. All

9. Place of living

- a. Urban
- b. Rural

SECTION – B

SELF-STRUCTURED KNOWLEDGE QUESTIONNAIRE

1. The internal reproductive organs are situated
 - a. Outside the bony pelvis
 - b. Behind the intestine
 - c. Within the bony pelvis
 - d. Below the umbilicus
2. Internal reproductive organ comprises of
 - a. Uterus, uterine tubes, ovaries, vagina
 - b. Uterus, uterine tubes
 - c. Uterine tubes, ovaries
 - d. Uterus, ovaries
3. What is the function of the uterus
 - a. Production of blood cells
 - b. Development of baby
 - c. Development of breast
 - d. Production of egg
4. The ovaries produce
 - a. Egg (female egg)
 - b. Sperm (male)
 - c. Cyst
 - d. Zygote
5. Menstrual flow drains from the uterus through the,
 - a. Urethral opening
 - b. Anal opening
 - c. Vagina
 - d. Do not know
6. The most common sign of ovulation is
 - a. Pain in one side of the abdomen
 - b. Blood flow
 - c. Irritation
 - d. Headache

7. The unfertilized egg discharged as menstrual blood through the vagina is called as
 - a. Menopause
 - b. Amenorrhea
 - c. Menstruation
 - d. Dysmenorrhoea
8. The content of menstrual flow includes
 - a. Only blood
 - b. Only fluid
 - c. Blood, fluids, sheds ovum
 - d. Only shed ovum
9. The duration of normal menstrual bleeding cycle is
 - a. One day
 - b. 3-5 days
 - c. 8-10 days
 - d. 10-12 days
10. What is the average age puberty begins
 - a. 10- 14yrs
 - b. 8- 11 yrs
 - c. 14-17yrs
 - d. Above 15yrs
11. Early puberty for a girl starts at when she is
 - a. 11yrs
 - b. 10yrs
 - c. 9yrs
 - d. 8yrs
12. What type of vaginal secretion will be present before menstruation?
 - a. Vaginal bleeding
 - b. White discharge
 - c. Curd like discharge
 - d. No discharge

13. Pubertal changes in girls are **except**
- a. Development of breast
 - b. Widening of hips
 - c. Voice changes
 - d. Height increases
14. The first sign of puberty for girls is usually
- a. A growth spurt
 - b. Breast budding
 - c. The first period
 - d. Pimple
15. Teens begin to get acne because,
- a. They don't wash their face well
 - b. They eat too much chocolate and soda
 - c. Of the hormonal changes
 - d. All
16. How to reduce mood swings during puberty?
- a. Divert attention
 - b. Adequate sleep
 - c. Control urges
 - d. All the above
17. Teens need how many hours of sleep per night?
- a. 9 hours
 - b. 8 hours
 - c. 7 hours
 - d. 6 hours
18. The best way to reduce the body smell is
- a. Change clothes regularly
 - b. Use deodorant
 - c. Take bath twice a day
 - d. All the above

19. On average, puberty begins first in
- Girls
 - Boys
 - Both
 - Do not know
20. Common premenstrual manifestation is **excepted**
- Crying
 - Headache
 - Irritation
 - Breast tenderness
21. How to reduce premenstrual syndrome
- Exercise
 - Family & friends support
 - The diet includes vitamins & minerals
 - All the above
22. The ideal material to be used during menstruation is
- An old cloth
 - Tampon
 - Sanitary pad / clean old cloth
 - Panties
23. During menstruation the perineum needs to be washed
- Every time after attending toilet
 - Once a day
 - Twice a day
 - Thrice a day
24. The pad should be changed every
- 4-6hrs and whenever need
 - Once in a day
 - Twice a day
 - No need to change

25. How will you clean your perineal area
- Clean from the back (anus) to front (vagina)
 - Clean from front to back
 - There is no specific way
 - As I like
26. How to wash the panties or sanitary cloth
- Soak in plain water before wash with soap and dry it under the sunlight
 - Wash with Dettol
 - Wash with soap
 - Don't know
27. The ideal method for disposing the soiled napkin
- Burying
 - Burning
 - Discard it in the dustbin
 - Flush in the toilet
28. The most important nutrient lost through menstrual blood
- Protein
 - Carbohydrate
 - Vitamin
 - Iron
29. What are the diets to be included during menstruation
- Normal diet
 - Only fluids
 - Rice with Rasam
 - Iron rich diet, fruits with normal diet
30. Iron rich diet includes
- Banana, oil, sugar
 - Ragi, jiggery, spinach
 - Rice water & coffee
 - Rice, curd & pappad

31. During menstruation girls can take a bath

- a. After 3 days
- b. Once in 2 days
- c. Twice a day
- d. After a week

32. During menstruation

- a. Isolate yourself
- b. Do moderate exercise
- c. Not to go to temple
- d. Not to take fruits

33. Ways to relieve menstrual pain

- a. Warm bath
- b. Light exercise
- c. Pain killer
- d. All the above

34. Usually menstruation occurs once in

- a. 5 days
- b. 10 days
- c. 28 days
- d. 38 days

APPENDIX - VIII

தனி நபர் புள்ளி விபரம்

தயவு செய்து கீழே கொடுக்கப்பட்டுள்ளவற்றில் உங்களுக்கு உரியதை குறிக்கவும்

வரிசை எண் :

1. வயது ()
அ) 10
ஆ) 11
இ) 12
ஈ) 13
2. வகுப்பு ()
அ) 6 -வது
ஆ) 7-வது
3. தாயின் கல்வித்தகுதி ()
அ)படிப்பறிவில்லாதவர்
ஆ)ஆரம்பப்பள்ளி (1-5)
இ) உயர்நிலைப்பள்ளி
ஈ)மேல்நிலைப்பள்ளி
உ)பட்டப்படிப்பு
4. தாயின் வேலை ()
அ)வீட்டிலிருப்பவர்
ஆ) அலுவலகத்தில் வேலை பார்ப்பவர்
இ) சுயதொழில்
ஈ) மற்றவை
5. குடும்ப வகை ()
அ) கூட்டுக்குடும்பம்
ஆ)தனிக்குடும்பம்
இ) விரிவாக்கப்பட்ட குடும்பம்

6. மதம் ()

- அ) இந்து
- ஆ) கிறிஸ்தவர்
- இ) இஸ்லாமியர்
- ஈ) மற்றவை

7. பிறப்பு வரிசை ()

- அ) I
- ஆ) II
- இ) III
- ஈ) IV

8. இந்த தகவல்களை யார் மூலம் பெற்றுக்கொள்கிறீர்கள்? ()

- அ) குடும்பம்
- ஆ) தோழியர்கள்
- இ) சக மாணவியர்கள்
- ஈ) மேற்கண்ட அனைத்தும்

9. இருப்பிடம் ()

- அ) நகரம்
- ஆ) கிராமம்

பகுதி — ஆ

அறிவுத்திறன் வினாக்கள்

1. பெண்ணின் உட்புற இனப்பெருக்க மண்டலம் எங்கு அமைந்துள்ளது?
அ) இடுப்பெலும்பின் வெளிப்புறத்தில் ()
ஆ) சிறுகுடலின் பின்புறத்தில் ()
இ) இடுப்பெலும்பின் உட்புறத்தில் ()
ஈ) தொப்புழுக்கு கீழே ()
2. உட்புற பெண் இனப்பெருக்க உறுப்புகள் யாவை?
அ) கருப்பை, அண்டநாளங்கள், அண்டகம் ()
ஆ) கருப்பை, அண்டநாளங்கள் ()
இ) அண்டநாளங்கள், அண்டகம் ()
ஈ) கருப்பை, அண்டகம் ()
3. கருப்பையின் வேலை என்ன?
அ) இரத்த செல்களை உற்பத்தி செய்தல் ()
ஆ) குழந்தையை உருவாக்குதல் ()
இ) மார்பகத்தை உருவாக்குதல் ()
ஈ) கருமுட்டை உற்பத்தி செய்தல் ()
4. அண்டகங்கள் எதனை உற்பத்தி செய்கிறது?
அ) முட்டை (பெண்) ()
ஆ) விந்தணுக்கள் (ஆண்) ()
இ) கட்டி ()
ஈ) கருத்தரித்த அண்டகம் ()
5. மாதவிடாய் இரத்தப்போக்கு கருப்பையிலிருந்து எதன் வழியே வருகிறது?
அ) சிறுநீர் புவழி ()
ஆ) மலத்துவாரம் ()
இ) கலவிவாய் ()
ஈ) தெரியாது ()

6. அண்டவெளியேற்றத்தின் பொதுவான அறிகுறி ?
 அ) வயிற்றில் ஒரு பக்கத்தில் வலி ()
 ஆ)இரத்தப்போக்கு ()
 இ) எரிச்சலடைதல் ()
 ஈ) தலைவலி ()
7. கருவுறாமுட்டை இரத்தமாக கலவிவாய் வழியே வெளியேறுவதை எவ்வாறு அழைக்கிறோம்?
 அ) மாதவிடாய் நின்று போதல் ()
 ஆ)மாதவிடாய் - இல்லாமை ()
 இ) மாதவிடாய் - சுழற்சி ()
 ஈ) டிஸ்மெனோரியா ()
8. மாதவிடாய் இரத்தப்போக்கில் அடங்கி உள்ளவை யாவை?
 அ) இரத்தம் மட்டும் ()
 ஆ) திரவம் மட்டும் ()
 இ)இரத்தம், திரவம், திசு, விடுபட்ட அண்டம் ()
 ஈ)விடுபட்ட அண்டம் மட்டும் ()
9. சராசரி மாதவிடாய் இரத்தப்போக்கு எத்தனை நாட்களாக இருக்கும்?
 அ) 1 நாள் ()
 ஆ)3-5 நாட்கள் ()
 இ) 8-10 நாட்கள் ()
 ஈ) 10-12 நாட்கள் ()
10. சராசரியாக எந்த வயதில் பூப்பெய்தல் தொடங்கும்?
 அ) 10 முதல் 14 வயது வரை ()
 ஆ) 8 முதல் 11 வயது வரை ()
 இ) 14 முதல் 16 வயது வரை ()
 ஈ) 16 வயதுக்கு மேல் ()
11. பெண்களுக்கு சீக்கிரமாக பூப்பெய்தல் எந்த வயதில் நடைபெறும்?
 அ) 11 வயது ()
 ஆ)10 வயது ()
 இ) 9 வயது ()
 ஈ) 8 வயது ()

12. மாதவிடாய் தொடங்குவதற்கு முன் கலவிவாயில் சுரப்பது என்ன?
- அ) இரத்தம் வருதல் ()
- ஆ) வெள்ளைப்படுதல் ()
- இ) தயிர் போன்று வெளியேறுதல் ()
- ஈ) ஒன்றும் வெளிவராது ()
13. பின்வருவனவற்றில் பெண்களுக்கு பருவ வயதில் ஏற்படாத மாற்றம் எது?
- அ) மார்பக வளர்ச்சி ()
- ஆ) இடுப்பு அகலமடைதல் ()
- இ) குரலில் மாற்றம் ()
- ஈ) உயரம் அதிகரித்தல் ()
14. பூப்பெய்தலில் போது பெண்களுக்கு பொதுவாக தோன்றும் முதல் அறிகுறி?
- அ) திடீர் வளர்ச்சி ()
- ஆ) மார்பக வளர்ச்சி ()
- இ) முதல் மாதவிடாய் ()
- ஈ) முகப்பரு ()
15. எதனால் இளம்பருவத்தில் முகப்பரு ஏற்படுகிறது?
- அ) முகத்தை சரியாக கழுவாததால் ()
- ஆ) அதிகமாக இனிப்பு சாப்பிடுவதால் ()
- இ) சுரப்பிகளின் மாற்றத்தினால் ()
- ஈ) மேற்கண்ட அனைத்தும் ()
16. பருவ வயதில் ஏற்படும் மனநிலை மாற்றத்தை எவ்வாறு குறைக்கலாம்?
- அ) கவனத்தை திசை திருப்புதல் ()
- ஆ) போதுமான தூக்கம் ()
- இ) மனதை ஒரு நிலைப்படுத்துதல் ()
- ஈ) மேற்கண்ட அனைத்தும் ()

17. இரவு நேரத்தில் இளம் பருவத்தினர் எத்தனை மணி நேரம் தூங்குவது அவசியம்?
அ) 9 மணி நேரம் ()
ஆ) 8 மணி நேரம் ()
இ) 7 மணி நேரம் ()
ஈ) 6 மணி நேரம் ()
18. உடம்பின் வியர்வை நாற்றத்தை போக்கும் வழிகள் யாவை?
அ) ஆடைகளை மாற்றுவதன் மூலம் ()
ஆ) வாசனை திரவத்தை பயன்படுத்துவதால் ()
இ) ஒரு நாளைக்கு இருமுறை குளிப்பதால் ()
ஈ) மேற்கண்ட அனைத்தும் ()
19. பருவமடைதல் பொதுவாக யாருக்கு முதலில் தொடங்கும்,
அ) பெண்கள் ()
ஆ) ஆண்கள் ()
இ) இருபாலருக்கும் ()
ஈ) தெரியாது ()
20. கீழ்க்கண்டவற்றில் பொதுவாக மாதவிடாய் வருவதற்கு முன் ஏற்படாத அறிகுறி?
அ) அழுதல் ()
ஆ) தலைவலி ()
இ) எரிச்சலடைதல் ()
ஈ) மார்பக வலி ()
21. மாதவிடாய் வருமுன் ஏற்படும் அறிகுறிகளை எவ்வாறு குறைக்கலாம்?
அ) உடற்பயிற்சி ()
ஆ) குடும்பம் மற்றும் நண்பர்களின் ஆதரவு ()
இ) வைட்டமின் மற்றும் தாது உப்புகள் நிறைந்த உணவு ()
ஈ) மேற்கண்ட அனைத்தும் ()
22. மாதவிடாயின் போது உபயோகிக்கக் கூடிய சிறப்பான உபகரணம்?
அ) பழைய துணிகள் ()
ஆ) பஞ்சு உருண்டை ()
இ) சானிடரி நாப்கின் / சுத்தமான பழைய துணி ()
ஈ) உள்ளாடை ()

23. உள்உறுப்புக்களை மாதவிடாயின் போது எத்தனை முறை சுத்தம் செய்ய வேண்டும்?

- அ) ஒவ்வொரு முறையும் சிறுநீர் கழித்தபின் ()
ஆ) ஒருமுறை ()
இ) இருமுறை ()
ஈ) மூன்றுமுறை ()

24. பஞ்சாடையை ஒரு நாளில் எத்தனை முறை மாற்ற வேண்டும் ?

- அ) 4- 6 மணிக்கு ஒருமுறை ()
ஆ) ஒரு நாளில் ஒரு முறை மட்டும் ()
இ) ஒரு நாளில் இருமுறை மட்டும் ()
ஈ) மாற்ற தேவையில்லை ()

25. உங்களுடைய உள்உறுப்புகளை எவ்வாறு சுத்தம் செய்வீர்கள் ?

- அ) பின் பகுதியிலிருந்த முன்பகுதிக்கு ()
ஆ) முன் பகுதியிலிருந்து பின்பகுதிக்கு ()
இ) தனிப்பட்ட முறை இல்லை ()
ஈ) என் விருப்பப்படி ()

26. உபயோகப்படுத்திய துணியை எப்படி சுத்தப்படுத்த வேண்டும்?

- அ) தண்ணீரில் ஊற வைத்து சோப்பு போட்டு துவைத்து சூரிய ஒளியில் காய வைக்க வேண்டும். ()
ஆ) கிருமி நாசினி மூலம் சுத்தப்படுத்த வேண்டும். ()
இ) சோப்பு போட்டு துவைக்க வேண்டும். ()
ஈ) தெரியாது ()

27. சானிடரி நாப்கின்களை உபயோகித்த பின் கழிப்பதற்கு சிறந்த வழி?

- அ) புதைத்தல் ()
ஆ) காகிதத்தில் மடித்து எரித்தல் ()
இ) குப்பைத் தொட்டியில் போடுதல் ()
ஈ) கழிவறையில் போட்டு தண்ணீர் ஊற்றுதல் ()

28. மாதவிடாய் இரத்தப்போக்கில் வெளியேறும் முக்கிய சத்துப் பொருள் எது?

- அ) புரதம் ()
ஆ) வைட்டமின் ()
இ) மாவு பொருள்கள் ()
ஈ) இரும்புச்சத்து ()

29. மாதவிடாய் காலத்தில் உண்ண வேண்டிய உணவுப்பொருள்கள் எவை?
 அ) தினமும் உண்ணும் உணவு ()
 ஆ) திரவ உணவுகள் மட்டும் ()
 இ) சாதம் மற்றும் ரசம் ()
 ஈ) தினசரி உண்ணும் உணவுடன் காய்கறிகள், பழங்கள் மற்றும் இரும்புச்சத்து நிறைந்த உணவுகள். ()
30. இரும்புச்சத்து நிறைந்த உணவுப்பொருள்கள் யாவை?
 அ) வாழைப்பழம், எண்ணெய், சர்க்கரை ()
 ஆ) கேழ்வரகு, வெல்லம், கீரை வகைகள் ()
 இ) கஞ்சித் தண்ணீர் மற்றும் காபி ()
 ஈ) சாதம், தயிர், அப்பளம் ()
31. மாதவிடாய் காலத்தில் பெண்கள் எத்தனைமுறை குளிக்க வேண்டும்?
 அ) மூன்று நாட்களுக்கு பிறகு ()
 ஆ) இரு நாளைக்கு ஒருமுறை ()
 இ) ஒரு நாளைக்கு இருமுறை ()
 ஈ) ஒரு வாரம் கழித்து ()
32. மாதவிடாய் காலத்தில் என்ன செய்ய வேண்டும் ?
 அ) உங்களை தனிமைப்படுத்துங்கள் ()
 ஆ) மிதமான உடற்பயிற்சி செய்தல் ()
 இ) கோயிலுக்கு செல்லாதிருத்தல் ()
 ஈ) பழங்கள் சாப்பிடாதிருத்தல் ()
33. மாதவிடாயின் போது ஏற்படும் வலியை குறைக்கும் வழிகள்?
 அ) வெதுவெதுப்பான நீரில் குளித்தல் ()
 ஆ) மிதமான உடற்பயிற்சி ()
 இ) வலி நிவாரணி ()
 ஈ) மேற்கண்ட அனைத்தும் ()
34. சராசரியாக மாதவிடாய் சுழற்சி எத்தனை நாட்களுக்கு ஒருமுறை நடைபெறும்?
 அ) 5 நாட்கள் ()
 ஆ) 10 நாட்கள் ()
 இ) 28 நாட்கள் ()
 ஈ) 38 நாட்கள் ()

APPENDIX – IX

ANSWER KEY

Serial number	Answer	Serial number	Answer
1.	C	18.	D
2.	A	19.	A
3.	B	20.	B
4.	B	21.	D
5.	C	22.	C
6.	A	23.	A
7.	C	24.	A
8.	C	25.	A
9.	B	26.	A
10.	B	27.	B
11.	A	28.	D
12.	B	29.	D
13.	C	30.	B
14.	B	31.	C
15.	C	32.	B
16.	D	33.	D
17.	D	34.	C

APPENDIX – X

VIDEO ASSISTED TEACHING PROGRAMME ON PUBERTY

1. Topic : Puberty
2. Group : Girls (10-13yrs)
3. Place : School
4. Duration : 45 minutes
5. Method of teaching : video assisted program cum demonstration
6. Teaching aids : video
7. General objective :

On completion of the teaching session the pre-adolescents girls will acquire knowledge regarding puberty.

8. Specific objectives:

On completion of the teaching program girls will be able to

- a. define puberty.
- b. explain the anatomy of female reproductive system.
- c. describe menstrual cycle.
- d. enumerate changes in girls during puberty.
- e. list out pre-menstrual symptoms
- f. discuss care during menstruation.

PUBERTY

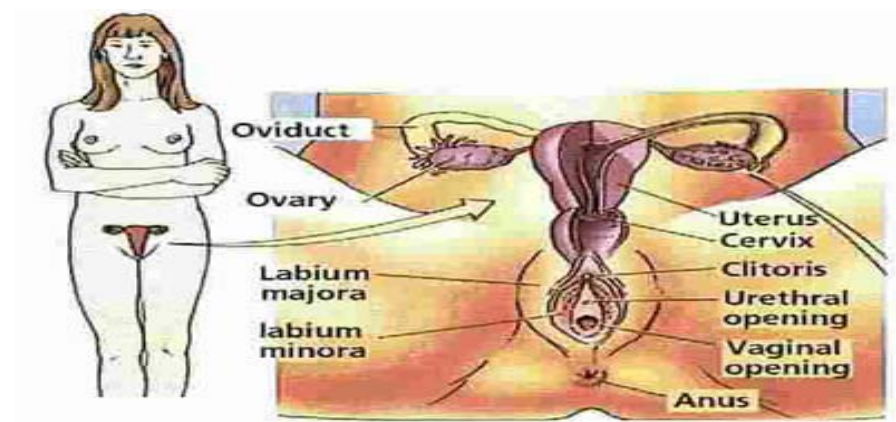
Between the ages of 10 to 13 mostly we notice many changes in our body, these changes are the signs of growing up.

The onset of sexual maturity is indicated by growth of hair in the underarm and private part, budding of the breast and the first period. So the girl should know about the reproductive system and function and physical changes.

Puberty is the period in life during which the reproductive organs undergo a surge in development and reach maturity. These changes will occur between the ages of 10 and 14 in girls and boys. But these changes take place at different times.

Puberty starts when increased amount of hormones secrets in the body. These hormonal changes lead to physical and psychological changes.

FEMALE REPRODUCTIVE SYSTEM



Reproductive system consists of the organs which help in the production of a baby.

Female reproductive system can be divided into,

External reproductive organs

Internal reproductive organs

EXTERNAL REPRODUCTIVE ORGANS

The part of the female reproductive system which can be seen externally is called external reproductive organs.

It is formed by;

Labia majora

Labia minora

Clitoris

Urethral opening

Vaginal opening

Anal opening

LABIA MAJORA

There are two thick folds made up of fat and tissue and covered with hair on the outer surface. It forms the sides of the external female reproductive organs.

LABIA MINORA

These are two thin folds of the skin lying in between the labia major.

CLITORIS

It is a small organ, which is situated at the junction of the labia minora.

URETHRAL OPENING

It is a small opening situated behind the clitoris, through which females pass urine.

VAGINAL OPENING

It is an opening which is found behind the urethral opening. It continues from the lower end of the uterus, through which blood escapes during menstruation.

ANAL OPENING

It is found behind the vaginal opening. It is a continuation of the intestine, through which individual passes motion.

INTERNAL FEMALE REPRODUCTIVE ORGANS

The reproductive organs which are situated in the bony pelvis are the internal female reproductive organs.

They are,

Uterus

Ovaries

Uterine tubes

Vagina

UTERUS

It is a hollow, thick pear-shaped organ. It is situated in the lower abdomen in between the bladder and the rectum. Uterus helps to grow a baby inside for nine months.

FUNCTION

Shelter the unborn baby during pregnancy and deliver the baby at the end of pregnancy. Prepare itself every month for receiving fertilized egg. This will be developed as a baby.

OVARIES

These are egg-producing organs of the female reproductive system. There are two ovaries, one on each side of the uterus.

UTERINE TUBES

There are 2 uterine tubes. It is present on each side of the uterus. These are about 10cm in length. At the end of the tube, there are finger-like projections. These finger-like projections will receive eggs when released from the ovary. The function of this tube is to carry the egg from ovary to the uterus. It also provides site for the ovum and the sperm to meet and fertilize.

VAGINA

It is the narrow tube shaped structure that extends from the lower part of the uterus to the vaginal opening. From this opening that the menstrual flow and the birth of the baby takes place.

MENSTRUAL CYCLE

Menstruation occurs in every month during the reproductive age of a female. So this continuous repeated process is called the menstrual cycle.

The reproductive age is in between the onset of menstruation and the cessation of menstruation.

There are different phases in the menstrual cycle. They are:-

MATURATION OF EGG AND PREPARATION OF INNER LAYER OF UTERUS:-

The ovary of a girl child consists of a number of eggs in it. After the first menstruation, because of the effect of hormones in the ovary, one of the eggs gets ripened every month.

As the ripening of eggs takes place in the ovary, the inner layer of the uterus prepares itself to receive the fertilized egg. This layer serves as a bed for the fertilized egg.

OVULATION

After an egg in the ovary is ripened, it is released from the ovary. This is called as ovulation. The most common sign of ovulation is the pain in one side of the abdomen.

MENSTRUATION:-

If the egg is not fertilized it moves down to the uterus and thickened inner layer of the uterus is not needed. Therefore it begins to shrink, and contracts then get washed off from the uterus through the vagina. Menstrual flow consists of blood, fluids, tissue and shed ovum. So this periodic discharge of blood and shedding of parts of the inner

layer of the uterus through the vagina is called as menstruation. It is a normal process in females, occurs once in a month. The duration of menstrual flow is 3-5 days.

Most girls start their first menses between the ages of 11 and 14. But some girls start from 8 years itself. Few girls get a white stain before they have their first period.

PUBERTAL CHANGES

When a girl starts to grow, the first sign is breast development and the appearance of pubic hair. The body grows considerably and takes on the female shape. Girl's hips become wider and rounder. Puberty culminates in the onset of menstruation, the first period being called the menarche.

Emotional changes

Girls experience sudden emotional changes during puberty. Changes like laughing at one time and crying at another time. Due to increase amount of hormones these emotional changes occur.

Emotional symptoms like,

Irritation, anger, anxiety

Moodiness, depression, uncooperative and fear

MANAGEMENT

Divert Attention

The best way of reducing emotional changes by diverting attention. Divert the mind through hobby classes, sports activities, dance classes and interacting with more friends.

Adequate sleep

To reduce the stress adequate sleep is necessary. Take adequate rest with the regular works. Inadequate sleep makes irritability, increases sadness and tired very easily. However have to take nine hours sleep during the night.

Control Urges

Mood swings during puberty are urging that make you act without thinking. Thus, controlling urges is the key to prevent regrets in retrospect. Increasing your levels of patience by meditating, diverting your mind from the situation.

Pimples

Almost everybody gets acne during their life, and most girls get acne around puberty. During puberty acne occurs due to hormones.

Wash face with warm water. But do not touch acne.

Smells

As girls' bodies develop during puberty, sweat glands also develop. Sweat gland helps to control the body's temperature and also produces more sweat.

The way to reduce the body smell is, by washing and changing clothes regularly and if possible use anti-perspirant deodorant.

PRE-MENSTRUAL SYMPTOMS

Premenstrual syndrome (PMS) is a mixed feeling of emotional, physical, psychological, and mood disturbances that occur after a

woman's ovulation and typically ending with the onset of her menstrual flow.

Signs of PMS

The commonest mood-related the signs of PMS contain:

Rage and frustration, anxiety, depression

Crying, oversensitivity

The most frequent physical signs and symptoms regarding PMS include:

Exhaustion, bloating (due to liquid retention), extra weight,

Breasts tenderness, acne, breakouts

Sleep disturbances with resting too much or perhaps too little (insomnia), and also appetite modifications with overindulging or even food cravings

GENERAL MANAGEMENT



Include healthy lifestyle like exercise, family and friends can provide emotional support during the time of a woman's cycle.

Do menses painful?

Some may feel discomfort or mild pain when they get periods. These pains are often not very long. However some girls experience quite severe pain which may stop them to do normal activity.

Ways to relief pain

- Take a warm bath.
- Hold a hot water bag on the stomach can be comforting.
- Better to use the painkiller as per doctor's advice.
- Mild exercises.

CARE DURING MENSTRUATION:-

Sanitary pad:

Most of the girls will use sanitary pad or clean cloth. A sanitary pad should be changed every 4 - 6 hours during the day, whether the blood flow is less or heavy. It is important for girl to wash her vaginal area. Wash from front to back after each urination and defecation &also whenever the pads are changed. Dispose the used pads by covering in a paper and burn it.

Sanitary napkins

If you are reusing the sanitary cloth, immerse it in plain water then wash with soap and water and rinse it neatly.

Dry under sunlight.

Then fold and keep it separately for next use.

Diet during menstruation:-

During menstruation girls lose blood from the body. Along with blood, iron is also lost from the body. So eating iron rich diet helps to replace the iron loss during menses. Therefore, it is necessary to take adequate diet that contains food items rich in iron. The common food items that are rich sources of iron are spinach, Ragi, jiggery, green leafy vegetables, liver etc.

Add enough calcium in the diet. Sources of calcium include milk and milk products and soya.

Eat more carbohydrates. It includes whole grain breads, fresh fruits and vegetables.

Add vitamins and minerals in the diet. Common sources are potatoes, bananas, egg yolk, green leafy vegetables and liver.

Keep well hydrated. Women lose up to 40 - 50 ml of blood during a regular period. So need to keep drinking water to replace loss of fluid.

Perform daily activities

Menstrual periods are part of normal life and should not stop from doing anything which is normally done. Menstruation does not make one unclean. It is not dirty blood and it is sterile as it is coming from inside the uterus.

The girl can do regular activities, like doing house hold works; daily bath, mild exercise and help a mother in household work, etc. These activities will help to improve the blood circulation in the body and will provide more energy. During menstruation, may feel tired and have a tendency to take complete bed rest. But this will reduce the blood

circulation to the body. So it is preferable to do daily activities because body movements will help to drain the bloody discharge thus reducing the discomfort.

Also you can take part in religious activities like reading the Bible, Jain temple or church. However In some cultures they believe that during menstruation the girl should not take part in religious activities or to help or not even enter into the kitchen, restriction for taking bath.

Management of unexpected periods:

Sometimes the menses can start unexpectedly. But there is no need to panic because in the beginning blood flow will be less. Most of the women would have faced the same problem. In school friend or a teacher or other adult may help. Some girls may carry a sanitary pad in their bag to meet unexpected situation.

But it quite often happens that girl period starts unexpectedly, some schools have sanitary napkins in the office.

Management for irregular cycles:

The interval between menstruations occurs once in 28days. In the beginning menstruation may be irregular for some girls, means once in two months or more. Later on they will get regular periods. In starting irregular periods are normal. There are many things that can cause irregular periods like diet, excessive exercise and climate.

If you do not get period for several months, consult a doctor could help to identify causes for the problem and you can undergo a treatment as per advice.

VIDEO TEACHING PLAN